Fall 2007

Kimmel Cancer Center at Jefferson
MAGAZINE NCI-designated

Introducing Friends of the Kimmel Cancer Center

Friends of the Kimmel Cancer Center was formed to establish a constituency of professionals who support and enhance the work of the Kimmel Cancer Center (KCC). Many of the Friends have been affected directly or indirectly by cancer; with this life changing experience they are determined to help others who face the disease. The mission of *Friends of the Kimmel Cancer Center* is to build capacity for the eradication of cancer. They fulfill this mission through four mechanisms: **volunteerism, education, advocacy and community outreach.** Friends@kimmelcancercenter.org

(L to R) Nicky Pestell, Richard Davidson, Kayce Cashman, Chris Booker, Richard Pestell, Chris Dezzi, Ivan Cohen, Helen Lane, Tricia Gomella and Lenny Gomella.

Hilary Koprowski, M.D., Winner of the 2007 Sabin Gold Medal

Dr. Koprowski is a professor in the Department of Cancer Biology at Jefferson Medical College and a member of the Kimmel Cancer Center at Jefferson. Dr. Koprowski, Director of both the Center for Neurovirology and the Biotechnology Foundation Laboratories at Thomas Jefferson University, is the 15th recipient of the Sabin Gold Medal.

This annual award recognizes the extraordinary accomplishments of those who make vaccine discoveries or employ vaccines to combat vaccine-preventable diseases.

"The Kimmel Cancer Center at Jefferson is proud of Dr. Koprowski's continued new accomplishments," says Richard Pestell, M.D., Ph.D., director of the Kimmel Cancer Center at Jefferson. "As one of the true giants in the field, whose original thinking in vaccine research has permanently benefited mankind, this honor for Dr. Koprowski is well deserved." (Continued page 8)

From the Director

Richard G. Pestell, MB, BS, MD, PhD, FRACP

Dear Friends,

In this Fall issue of the Kimmel Cancer Center Magazine we highlight exciting progress made at the center. Over the last two years we have seen 56 new full faculty members join the Kimmel Cancer Center.

The Department Chair Reports describe key new advances for our patients with cancer in Medical Oncology, Radiation Oncology, Surgery and Urology.

KCC member Dr. Koprowski received the Sabin Gold Medal, the highest award of its kind. Our clinical faculty were recognized as top doctors in the Philadelphia area. Fundamental new discoveries were made on the key mechanisms driving breast cancer and colon cancer. In this issue, we highlight the Kimmel Cancer Center's new Melanoma Center of Excellence, the new awards for clinical excellence to cancer physicians and surgeons, as well as upcoming events.

We are particularly grateful to supporters of the Kimmel Cancer Center and the new members of the Friends of the Kimmel Cancer Center. I would encourage our readers who are interested in receiving updates of key discoveries in cancer prevention, research and treatment to join the *Friends of the Kimmel Cancer Center* by emailing Friends@kimmelcancercenter.org.

The first of our annual concerts, the **Kimmel Cancer Center Concerts for the Cure**, will be held November 11, 2007. At this event we honor **Olivia Newton-John**. Please join us for a night to remember**!**

To make a donation supporting the Kimmel Cancer Center, Call 1–877– 533–3443 or visit our website at

www.KimmelCancerCenter.org
& simply click on the gift box.

KCC Member Department Chairs

Director Kimmel Cancer Center
Chairman Cancer Biology
Richard G. Pestell M.D., Ph.D

Biochemistry & Molecular Biology
Jeffrey Benovic, Ph.D.

Radiation Oncology
Walter J. Curran Jr., M.D.

Medical Oncology
Neal Flomenberg, M.D.

Urology
Leonard G. Gomella, M.D.

Pathology
Fred Gorstein, M.D.

Otolaryngology/Head & Neck Surgery
William M. Keane, M.D.

Microbiology & Immunology
Timothy Manser, Ph.D.

Health Policy
David B. Nash M.D., M.B.A.

Radiology
Vijay Rao, M.D.

Neurosurgery
Robert H. Rosenwasser, M.D.

Dermatology & Cutaneous Biology
Jouni J. Uitto, M.D., Ph.D.

Pharmacology & Experimental Therapeutics
Scott Waldman, M.D., Ph.D.

Family & Community Medicine
Richard C. Wender, M.D.

Surgery
Charles Yeo, M.D.

Myrna Brind Center for Integrative Medicine
Daniel Monti, M.D.

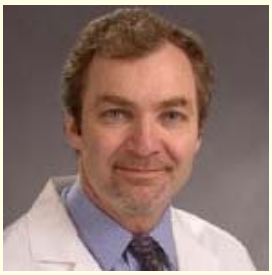
From the Department of Medical Oncology – Neal Flomenberg, M.D.

One of the Department's cornerstones for many years has been its program in the biology and treatment of melanoma. Recently, the Melanoma Hope Network designated KCC's program as a Melanoma Center of Excellence (MCE), one of only ten in the country. The designation is for centers that offer exceptional care, knowledge, and compassion to patients suffering from melanoma.

Melanoma is the most deadly form of skin cancer, while uveal melanoma represents the major cause of death from eye tumors in adults.
Michael Mastrangelo, a physician and researcher at Jefferson for more than 20 years, leads the program. He is joined by a group of able clinical investigators including Drs. David Berd, Henry Maguire, and Takami Sato. Among the group's accomplishments are the following major achievements:

- Identification of the dysplastic nevus, a precursor lesion and marker of patients at risk.
- Definition of important aspects of melanoma biology such as correlating the time until disease recurrence by the thickness of the primary melanoma lesion.
- Pioneering the use of autologous tumor vaccines in cancer treatment, including the first clinical use of hapten-modified tumor vaccines.
- Identification of the immune potentiating effects of cyclophosphamide and other chemotherapeutic agents.
- Use of recombinant Vaccinia-GM-CSF virus to treat dermal melanoma metastases.
- Identification of IL-10 secretion as an adaptive immunoprotection mechanism in melanomas.
- Use of immunoembolization for the treatment of hepatic metastases of uveal melanoma, which has tripled the survival of these patients.
- Together with other Kimmel Cancer Center investigators, the first use of intravessically administered Vaccinia for the treatment of bladder cancer.

This is a list of accomplishments in which the department, The Kimmel Cancer Center, and university can take great pride. Nearly 8,000 people die from this disease each year, so more work remains to be done.



From the Department of Radiation Oncology – Walter J. Curran, Jr., M.D.

Jefferson's Department of Radiation Oncology is delighted to welcome two new physician faculty to our group. Dr. Alexander Lin joined the department in August 2007 after completing training in radiation oncology at the University of Michigan in Ann Arbor. He made substantial contributions to the literature during his training at Michigan, defining innovative approaches to radiation planning and delivery. Among his responsibilities here at Jefferson, Dr.Lin will lead several innovative multi-modality clinical trials for patients with upper gastrointestinal malignancies. He has already partnered with Drs. Yeo, Dicker, and Anne in submitting for outside review an investigator-initiated trial for patients with locally advanced pancreatic cancer.
In October 2007, we will welcome Dr. Lydia Komanicky back to Jefferson as Professor and Director of Clinical Operations within the department. Dr. Komanicky will also serve as a Co-Director of Jefferson's Breast Care Center. She has served as professor and chairman of the Department of Radiation Oncology at Drexel University for the past five years and has established herself both there and in her prior tenure at Jefferson as the premier radiation oncologist in the region for women with breast cancer. Please join us in welcoming both of these outstanding individuals to our group!
The radiation oncology faculty members continue to accrue patients to investigator-initiated trials, at a vigorous pace. Currently these trials are led by Drs. Adam Dicker, Richard Valicenti, Mitchell Machtay, Maria Werner-Wasik, and myself. These faculty and their colleagues in other specialties are excited to provide our patients with the hope of receiving the very latest in innovative and compassionate care.

From the Department of Surgery – Charles J. Yeo, M.D.

The Samuel D. Gross Professor.

The Department of Surgery is delighted to be a part of the KCC newsletter.
Dr. Adam Berger works closely with the KCC for clinical and research programs and has built an impressive clinical practice in melanoma surgery.
Dr. Eugene Kennedy has recently published on the use of Clinical Pathways for the Whipple operation. He has been instrumental in growing the clinical volumes in complex Hepatobiliary (HPB) surgery; Jefferson performed well over 130 pancreatic resections in 2006.
Drs. Gary Rosato, Karen Chojnacki, Scott Silvestri and Tom D'Amato have seen increasing numbers of patients for esophageal resection and have worked with Jefferson oncologists to expand the use of pre-op chemoradiation therapy.
Drs. Scott Goldstein and Gerald Isenberg, in the Division of Colorectal Surgery, have grown the volume of laparoscopic colorectal surgery nicely, while Dr. Goldstein has recently been added as a member of the NSABP.
Dr. Jonathan Brody has joined the faculty to investigate the molecular genetics of pancreatic cancer. He works closely with two talented oncology researchers, Drs. Hwyda Arafat and Susan Lanza-Jacoby. The Department of Surgery and the KCC have built bridges between the basic sciences and the clinics, striving toward the goal of 'bench to bedside' discoveries.
Dr. Hwyda Arafat, Assistant Professor of Surgery, was awarded a prestigious Research Scholar Grant from the American Cancer Society (ACS) to continue her work entitled "Novel Mediators of Angiogenesis in Pancreatic Cancer." Dr. Arafat will use the award to study the scientific basis behind the potential use of high blood pressure medications as anticancer drugs. In 2006, she and her co-workers showed that two types of pressure-lowering drugs – ACE inhibitors and AT1R blockers – may reduce tumor angiogenesis. Her group's results suggest that such drugs may become part of a novel strategy to control and even prevent the growth and spread of cancer in susceptible individuals. Eventually, Dr. Arafat would like to see the work progress from the laboratory into clinical trials.
Dr Susan Lanza-Jacoby, Professor of Surgery has been awarded a research grant from the Pennsylvania Department of Health to continue her study of the role of the ErbB2 and COX-2 signaling pathway in HER-2 breast cancer. This research suggests that cruciferous vegetables have cancer-fighting properties and can kill breast cancer cells.

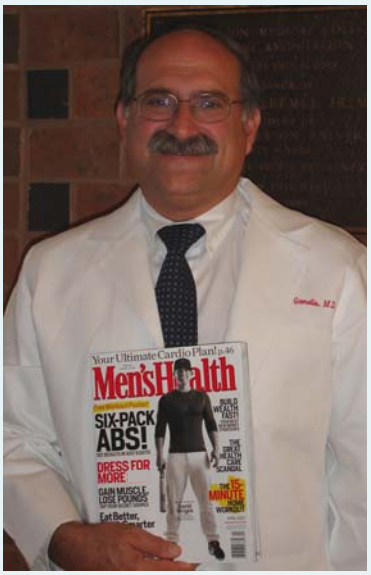
Man to Man: A lecture and networking program for men who have been diagnosed with prostate cancer or who want to learn more about the condition. *Man to Man* is co-sponsored by the American Cancer Society.

Thurs. Sept. 20 12-1:30pm • ***PSA Rising Post Treatment*** Dr Leonard G. Gomella, M.D.

Thurs. Nov.15, 12-1:30pm • ***Robotic Prostatectomy*** Dr Costas Lallas, M.D.

For more information please call 215-955-8370 or email: support-advocacy@kimmelcancercenter.org

From the Department of Urology - Leonard Gomella, M.D.



The Department of Urology at the Kimmel Cancer Center at Jefferson is the site for several high-profile clinical trials. We have been chosen as one of only four sites in the US to participate in the first adult clinical trials in the field of tissue engineering. We are also one of a limited number of study sites to treat prostate cancer patients with a new technique known as high intensity focused ultrasound (HIFU). The treatment has been available in Europe for many years but is not yet available in the US. Dr. Eduoard Trabulsi and I are the lead physicians for the KCC site. The purpose of this study is to determine the equivalence of the Ablatherm HIFU as compared to Cryotherapy for the treatment of low risk, localized prostate cancer. The study is currently enrolling men over age 50 diagnosed with clinical T1a, b or c or T2a localized prostate cancer. HIFU is a noninvasive therapy that uses highly focused ultrasound energy to ablate the prostate tissue.

Top Doc Award

The April 2007 edition of *Men's Health Magazine* featured its first annual list of physicians who have the "knowledge, the experience and the tools to maintain and repair the 21st Century man." Dr. Leonard Gomella, the Bernard Godwin Professor of Prostate Cancer and Chair of Urology at Jefferson, was acknowledged as one of the top 20 urologists in the United States.
"The Kimmel Cancer Center and men with prostate cancer everywhere are fortunate to have Dr. Gomella as a contributor to the field", said Richard G. Pestell, M.D., Ph.D., Director of the Kimmel Cancer Center. "Dr. Gomella combines superlative clinical skills, a strong translational basic science background and the ability to function as an outstanding teacher and team builder. We are proud of this well-deserved national recognition."

Daniel Monti, M.D.

Caring at KCC's Integrative Cancer Center

The Jefferson-Myrna Brind Center of Integrative Medicine (Brind Center), is at the forefront of America's integrative medical care. Led by Daniel Monti, M.D, the Brind Center has a large study funded by the National Cancer Institute (NCI) that allows the KCC to provide free support programs to women with cancer. As a full faculty member of the KCC, Dr. Monti works with other KCC faculty to develop joint clinical trials.

The Center's mission is to merge the best conventional medicine with promising, evidence-based complementary therapies. The goal is to provide a healing approach that considers the whole person—body, mind, and spirit. In turn, this mission is embedded within the KCC's philosophy of patient care. The Center's physicians are board-certified in their respective specialties and they all have Jefferson appointments. The Center is involved with medical education on several levels, including teaching medical students and residents, bringing in renowned international speakers, and offering the only regular Continuing Medical Education-approved grand rounds program in Integrative Medicine.

An important clinical focus at the Brind Center is the Integrative Oncology Program, which supports patients at all stages of their cancer care. Brind Center physicians use a variety of integrative approaches to help patients develop individualized treatment plans, increase energy, decrease pain, improve nutritional status, enhance their sense of well-being and improve the quality of their lives. www.jeffersonhospital.org/cim

HOW CLINICAL TRIALS ARE CONDUCTED AT THE KCC

Matthew Carabasi, M.D., Associate Director for Clinical Investigations

Throughout this magazine you will read about new patient treatments developed at the Kimmel Cancer Center (KCC). My team of more than 20 dedicated staff helps investigators take their ideas and design clinical trials, to truly advance cancer treatment. Maureen Morgan, MS, directs the Clinical Research Management Office, or CRMO, which supports all trial activity.

New protocols from KCC investigators, and from other NCI-designated cancer centers, oncology cooperative groups or the pharmaceutical industry, are reviewed by a multidisciplinary team made up of doctors, staff and patient advocates. The protocols for all Jefferson's cancer-related trials that involve patient contact are then sent to the Clinical Cancer Research Review Committee, (CCRRC), chaired by Scott Waldman, M.D., Ph.D. After approval, the protocol is reviewed by the Institutional Review Board (IRB). To ensure compliance, all departments at Jefferson enter cancer patient information into a common data base that uses computer programs developed by Jack London, Ph.D., Director of the KCC Informatics Core.

Once a trial is established, the CRMO clinical staff actively look for potential participants in three ways: 1) they review the lists of patients scheduled for evaluation at the various multidisciplinary clinics; 2) they discuss individual patients with their physicians; and 3) they attend discussions of patients seen in multidisciplinary clinics.

To conduct clinical research at the highest level requires innovative thinking, regulatory compliance and a strong support system. We are extremely fortunate to have a large number of dedicated staff who ensure that our patients receive state-of-the-art care, under the safest conditions.

Ronald Myers, Ph.D., KCC Member, President of PAC3

The Pennsylvania Cancer Control Consortium (PAC3) has recently elected Dr. Myers as its president. PAC3 addresses the challenge of cancer control in the Commonwealth of Pennsylvania. The organization began when 60 leaders from diverse stakeholder groups, convened to discuss the past, present, and future of cancer control in the Commonwealth. PAC3 currently represents a statewide collaboration of organizations from the six health districts, and its reach extends to all 67 counties of the state. Participants include representatives of the State Department of Health, American Cancer Society, NCI-designated cancer centers, health care delivery organizations, health care providers, health care consumers, community based organizations, community leaders, researchers, voluntary organizations, and industry.

Meeting participants worked to establish a framework for activities to ease the burden of cancer in Pennsylvania. This plan provides a statewide blueprint for all sectors - public, academic, private, and volunteer - to work together to meet the growing challenge of cancer control. The PAC3 then established five implementation teams. In addition to a research team, they address the four areas of the cancer continuum: Prevention/Healthy Lifestyles, Early Detection & Screening, Treatment and Care Delivery, Quality of Life and Survivorship.

PAC3 is also developing a web-based statewide Cancer Assets Inventory. This Inventory will facilitate the work of the PAC3 Early Detection/Screening Team by providing information about available resources and assets across the state. In support of this work, the Pennsylvania Department of Health was awarded a cancer-planning grant from Center for Disease Control

Clinical Translational Research Retreat at the Kimmel Cancer Center

Front row - The Speakers: Drs. Andrew Quong, George Prendergast, Walter Curran, Richard Pestell, Jonathon Brody, Charlie Yeo and Yan Yu.

Back rows: Participants of Clinical Translational Research Retreat at the Kimmel Cancer Center.

The Kimmel Cancer Center at Jefferson held a Clinical Translational Research Retreat on Saturday, December 9, 2006. The retreat was well attended by clinicians and basic scientists who discussed new opportunities for translational research. The presentations included Opening Remarks and Program Overview, by Richard G. Pestell, and Walter J. Curran, Jr.
Novel presentations included, "Therapeutic Inhibition of Immune Escape in Cancer", by George C. Prendergast, "Immune Modulation of EGFT Targeted Therapy", by Ulrich Rodeck, "Pancreatic Tumor Profiling: Stratifying Patients for Rationale Therapy", by Jonathan Brody, "Robotics Assisted interventions", by Yan Yu, and "Mass Spectrometry Based Approaches to Biomarker Discovery and Validation", by Andrew Quong.

Links to all of the presentations are available at http://www.kimmelcancercenter.org/kcc/kccnew/news/KCC-Translational-Research-Retreat.php

Facing Breast Cancer: monthly lectures for women facing breast cancer. Lectures address the latest information about breast cancer treatment, detection, and survivorship issues.
For details, call 215-955-8370 or email support-advocacy@kimmelcancercenter.org

•Innovative Options for Advanced Breast Cancer
Thursday, Oct. 18,
12:00 pm to 1:30 pm

•Healthy Cooking
Thursday, Nov. 08,
12:00 pm to 1:30 pm

Look Good…Feel Better: A free program for women who are undergoing cancer treatment. Cosmetologists teach skin care, wig styling, scarf tying and nail care. Look Good…Feel Better is sponsored by the American Cancer Society.

Monday, September 10, 2007
1:30 pm to 3:30 pm
Monday, November 12, 2007
1:30 pm to 3:30 pm
For More information Call 215-955-8370 or email
support-advocacy@kimmelcancercenter.org

Cancer Rehabilitation Specialist helps KCC Patients Thrive

Progress in cancer treatment has dramatically extended the lives of many patients. However, the initial disease, necessary surgery, chemotherapy or radiation treatments, can affect the quality of our patients' lives. Surgery and subsequent radiation treatment can result in significant pain, or reduce range of motion, impeding patients' ability to return to their usual activities. Similarly, deconditioning, particularly after chemotherapy, can contribute to the well-recognized phenomenon of cancer-related fatigue. Other patients experience weakness and lymphedema.
Over the past two decades, specialists in physical medicine and rehabilitation have worked to address the many functional problems afflicting cancer patients. Cancer rehabilitation is now a sub-specialty area for rehabilitation physicians, and is included in their residency training and board certification assessment.

Ongoing research has proven that specific rehabilitation interventions can significantly help our cancer patients. Rehabilitation specialists can work with KCC patients while they are in the hospital. Thomas Jefferson University's Department of Rehabilitation Medicine and its Rehabilitation Services have been expanding and refining their ability to meet the needs of cancer patients at the Kimmel Cancer Center.

Patients with physical limitations associated with cancer or its treatment should discuss these issues with their physicians and schedule an evaluation with Deborah Franklin, Ph.D., M.D., Director of Cancer Rehabilitation, by calling 215-955-1200.

KCC Scientists Identify Protein Key to Breast Cancer Spread; Potential New Drug Target

Researchers at the Kimmel Cancer Center at Jefferson have identified a protein that is key to helping treat patients with breast cancer. The finding, reported in the journal *Proceedings of the National Academy of Sciences*, could be a potential target for new drugs aimed at stopping or slowing the growth and progression of breast cancer.

Kimmel Cancer Center Director Richard Pestell, M.D., Ph.D., and his colleagues genetically engineered mice to lack the protein Akt1, which normally plays a role in keeping cells alive by interfering with programmed cell death. Breast and other cancers make an overabundance of the protein.

Mice lacking two copies of the gene that produces Akt1 rarely had any tumors whereas mice with two copies of Akt1 rapidly developed significant cancer.

"The finding was exciting because it told us that Akt1 is a potentially useful target for ErbB2-positive breast cancer," Dr. Pestell says. "More interesting was that even if the mouse developed a tumor, it didn't develop metastases. We proved that there was a requirement for Akt1 in metastasis, which makes Akt1 an exciting target for metastatic breast cancer."

While scientists have looked at Akt as a drug target, notes Arthur Pardee, Ph.D., professor emeritus of medical oncology at the Dana-Farber Cancer Institute in Boston, its role in metastasis is less emphasized. "Blocking this with anti-Akt drugs might provide a novel treatment, especially against early cancers," he says.

Colon Cancer a Disease of Hormone Deficiency, KCC Team Finds

Professor Scott Waldman, M.D., Ph.D., chair of the Department of Pharmacology and Experimental Therapeutics at the Kimmel Cancer Center at Jefferson has found new evidence suggesting that colon cancer is actually a disease of missing hormones and could potentially be treated with hormone replacement therapy.

Reporting August 1, 2007 in the journal *Gastroenterology*, Dr. Waldman and his co-workers showed that guanylyl cyclase C (GCC), a protein receptor on the surface of intestinal epithelial cells for the two hormones, guanylin and uroguanylin, can suppress tumor formation. These hormones regulate the growth of intestinal epithelial cells.

Early in colon cancer development, these growth-controlling hormones are "lost" and not expressed, disrupting GCC's activity, contributing to tumor formation.

Using two separate mouse models that mimic the development of colon cancer in humans, his team showed that GCC signaling blocks such tumors from forming.

"We found that in animals that have mutations in the Adenomatous Polyposis Coli (APC) gene, tumors developed in the colon and small intestine, which is expected," Dr. Waldman says. "A lack of GCC resulted in both larger and greater numbers of tumors in the large intestine." In the carcinogen model, the absence of GCC caused an increase in both tumor number and size.

The finding "converts colon cancer from a genetic disease, which is the way we've all thought about it, to a disease of hormone insufficiency, which is a completely different way of thinking about the disease."

KCC Scientists Uncover Gene Mutation that Cuts Colon Polyps, May Suppress Cancer

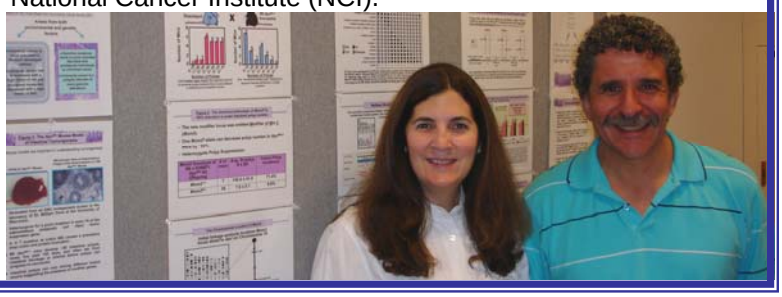
Drs. Linda Siracusa, Ph.D., and Arthur Buchberg, Ph.D., at the Kimmel Cancer Center at Jefferson have found a gene mutation that can dramatically reduce the number of colon polyps that develop, and in turn, potentially cut the risk of cancer.

In experiments with mice genetically prone to develop polyps, researchers discovered that animals carrying one copy of the damaged gene, *Atp5a1*, had about 90 percent fewer polyps in the small intestine and colon. People with large numbers of such polyps have a significantly higher risk of developing colon cancer. Therefore, this finding may provide new ways to diagnose, prevent and treat colon cancer.

Their findings were published March 22, 2007 in the journal *Genome Research*. The *Atp5a1 gene* is crucial for the cell's energy production. It is also a "modifier" gene. Modifier genes play a role in an individual's susceptibility to cancer.

"Modifier genes alter a phenotype dictated by other genes," explains Dr. Siracusa. "If a person inherits a mutation in the APC gene, mutation of this modifier gene would reduce the number of polyps and can mean a person is more resistant to developing polyps and tumors."

Colorectal cancer is currently the second leading cause of cancer death in the United States. The work was supported by grants from the National Institutes of Health (NIH) and the National Cancer Institute (NCI).



Selected New Federal Grant Funding

Financial awards show total funds (direct and indirect), for the duration of the award.

Hwyda A. Arafat, M.D., received $720,000 for Novel Mediators of Angiogenesis in Pancreatic Cancer.

Jeffrey Benovic, Ph.D., received $1,472,500 for Regulation of CXCR4 Signaling (Rui – Co-PI).

René Daniel, M.D., Ph.D., received $1,178,000 for Cellular Co-Factors in Stable Retroviral Transduction.

Laurence C. Eisenlohr, V.M.D., Ph.D., received $1,270,500 for The Basis for MHC Class II-Restricted Proteasome Dependent Epitopes.

Flemming Forsberg, Ph.D., received $476,192 for Subharmonic Microbubble Signals for Pressure Estimation.

Philippe Frank, Ph.D., received $300,000 for Caveolins in Heart Disease.

Renato V. Iozzo, M.D., received $942,400 for Natural EGFR Antagonists and Cancer.

Walter Koch, Ph.D., received $1,550,000 for Adrenal GRKs and Adrenergic Signaling in Heart Failure.

Michael Lisanti, M.D., Ph.D., received $1,472,500 for CAV-1 Epithelial-Stromal Interactions and Breast Cancer.

Diane M. Merry, Ph.D., received $1,229,000 for Polyglutamine Neurotoxicity in SBMA.

Ronald Myers, Ph.D., received $2,190,246 for Tailored Navigation in CRC Screening.

Marja Nevalainen, M.D., Ph.D., received $581,247 for Interaction Of Transcription Factor Stat5 With Androgen Receptor in Growth Promotion of Prostate Cancer.

John Pastorino, Ph.D., received $1,085,000 for Targeting Hexokinase II in Chemotherapy.

Richard G. Pestell, M.D., Ph.D., received $273,969 for an Automated High Throughput DNA Sequencer, and $1,937,500 for Initiation and Maintenance in Mammary Tumorigenesis and a further $775,000 for DOD Synergistic Cyclin D1 and CAV-1 in Breast Cancer.

Linda D. Siracusa, Ph.D., received $1,472,500 for Susceptibility Genes and Colorectal Cancer. (Buchberg- Co-PI)

Yuri Sykulev, M.D., Ph.D., received $411,750 for Immune Receptors on Cytotoxic Lymphocytes and Target Cells.

John C. Williams, Ph.D., received $284,160 for Analytical Ultracentrifuge

Edith Mitchell, M.D., and Gloria Morris, M.D., Ph.D.

KCC Oncologists Show Breast Cancers to be More Aggressive in African American Women

A study of more than 2,200 women at the Kimmel Cancer Center at Jefferson shows that African American women have more advanced breast cancer at the time of diagnosis than Caucasian women.

The research, led by Edith P. Mitchell, M.D., Clinical Professor and Gloria Morris, M.D., Ph.D., Assistant Professor in the department, compared clinical, molecular and demographic data from 2,230 African American and Caucasian women diagnosed with breast cancer at Thomas Jefferson University Hospital between 1995 and 2002 with similar data from more than 197,000 women in the National Cancer Institute's Surveillance, Epidemiology and End Results database.

Reporting on July 9, 2007 in the online edition of the journal *Cancer*, Drs. Mitchell and Morris found that African Americans are more likely to have later stage and higher grade tumors at diagnosis, meaning a more aggressive and invasive disease than their Caucasian counterparts. In addition, the breast cancer tumors from African American women had characteristics that predicted worse prognoses and poorer outcomes.

While African American women have been found to have a lower incidence of breast cancer than Caucasian women, African American women die from the disease at a higher rate. The gap between death rates of African American and Caucasian women is increasing. Though access to healthcare is a strong factor contributing to disparities in cancer rates and outcomes between African Americans and Caucasians, says Dr. Mitchell, the Jefferson study and others show that biological differences play important roles.

The overall goal, she notes, is to find new therapeutic targets. To that end, Drs. Morris, Mitchell and their colleagues want to use microarray technology developed at the Kimmel Cancer Center, to examine the more aggressive tumor types in African American women and compare them to tumors in Caucasian women to try to determine differences at the molecular level.

Hilary Koprowski, M.D., is the 2007 Winner of the Sabin Gold Medal

(Continued from front page) **Dr. Koprowski's ground-breaking work in polio and rabies greatly advanced vaccine research. In the late 1940s, his efforts resulted in production of the first oral polio vaccine that was used extensively to immunize people on four continents.**

In the 1970s, his passionate interest in rabies led him to develop a new tissue culture-based vaccine that is more effective and less painful than the traditional Pasteur technique.

Dr. Koprowski pioneered the development of monoclonal antibodies, which are used to detect cancer antigens and in cancer immunotherapy. He has successfully used plants to produce vaccines and antibodies. Dr. Koprowski and his associates developed the first functional, monoclonal antibody against colorectal cancer antigen and rabies. This antibody, is used throughout the world for diagnosis of pancreatic cancer by detection of the antigen in blood.

Dr. Koprowski is the author of more than 850 scientific papers and is a member of many of the world's most prestigious scientific societies. He has received honorary degrees from numerous universities, and is the recipient of many honors, including the Philadelphia Award, the Scott Award, and the French Legion of Honor. Dr. Koprowski is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. He was both a Fulbright Scholar and a Rockefeller University Fellow. He has been a continuous grantee of the National Institutes of Health for more than 50 years.

Pancreatic Cancer and Related Diseases: Patient Symposium

An opportunity for patients, family members and friends to learn about pancreatic cancer detection, diagnosis and treatment at the KCC.

Tuesday, Oct. 30th 10 am – 2 pm

Ballroom at the Ben, 834 Chestnut Street

Registration is required, as space is limited.

Please call Megan Hart at 215-955-8730 to reserve your seat.

Scientists at the Kimmel Cancer Center at Jefferson have, for the first time, used genetically modified plants to create a vaccine that protects animals against smallpox.

The researchers, led by Hilary Koprowski, M.D., used the collard plant as a factory to produce a specific immune-arousing piece – a "subunit" – of the vaccinia virus that causes smallpox, in effect, creating a vaccine. They showed that both mice and pigs had strong immune responses to vaccine administered through the nose and by injection. The immunized mice, in fact, generated antibodies that checked the spread of virus in the test tube, and protected them when given a lethal dose of virus. Their results were published in the journal *Proceedings of the National Academy of Sciences*.

Advances in Pancreatic Cancer Care (Webcast) A real-time internet broadcast featuring a mini-Whipple procedure and panel discussion with members of the Jefferson Pancreatic Cancer and Related Diseases Team.

Tuesday, Sept. 18th at 4:30 p.m. www.JeffersonHospital.org/webcast

Replay of the procedure available beginning Sept. 19th, 2007

Recently published Articles by Scientists at the KCC

Acetylation of the p53 DNA-binding Domain Regulates Apoptosis Induction. *Molecular Cell.* Sykes SM, Mellert HS, Holbert MA, Li K, Marmorstein R, Lane WS, McMahon SB.

Transcription of Bxd noncoding RNAs Promoted by Trithorax Represses Ubx in cis by Transcriptional Interference. *Cell.* Petruk S, Sedkov Y, Riley KM, Hodgson J, Schweisguth F, Hirose S, Jaynes JB, Brock HW, Mazo A.

Cyclin D1 repression of Nuclear Respiratory Factor 1 Integrates Nuclear DNA Synthesis and Mitochondrial Function. *Proceedings of the National Academy of Sciences.* Wang C, Li Z, Lu Y, Du R, Katiyar S, Yang J, Fu M, Leader JE, Quong A, Novikoff PM, Pestell RG.

DACH1 is a Cell fate Determination Factor that Inhibits Cyclin D1 and Breast Tumor Growth. *Molecular and Cellular Biology.* Wu K, Li A, Rao M, Liu M, Dailey V, Yang Y, Di Vizio D, Wang C, Lisanti MP, Sauter G, Russell RG, Cvekl A, Pestell RG.

Somatic Excision Demonstrates that c-Jun induces Cellular Migration and Invasion through Induction of Stem Cell Factor. *Molecular and Cellular Biology.* Katiyar S, Jiao X, Wagner E, Lisanti MP, Pestell RG.

The Pyroptosome: a Supramolecular assemby of ASC dimers Mediating Inflammatory Cell Death via Caspase-1 activation. *Cell Death and Differentiation.* Fernandes-Alnemri T, Wu J, Yu JW, Datta P, Miller B, Jankowski W, Rosenberg S, Zhang J, Alnemri ES.

Melanoma Center of Excellence

The Kimmel Cancer Center (KCC) at Jefferson has been recognized by The Melanoma Hope Network (MHN) as a *Melanoma Center of Excellence (MCE)*. The KCC is one of only 10 cancer centers to be so designated by the network.

KCC director Richard Pestell, M.D., Ph.D. noted "The naming of the Kimmel Cancer Center as a Melanoma Center of Excellence reflects the long tradition of translational discovery by Drs. Mastrangelo and Takami Sato. Their recent studies have directly impacted the lives of melanoma patients. Those patients who have been successfully treated in Dr. Sato's clinical trials are living testimony to the success of his research, and the mission at Jefferson."

Dr.'s Takami Sato, Richard Pestell, and Michael Mastrangelo with Dr Sato's Laboratory staff.

Members of the KCC Melanoma Center of Excellence

"Jefferson physicians strive to define the diagnostic and treatment programs that best serve individual melanoma patients' needs," says Michael J. Mastrangelo, M.D., Director of the melanoma program in the Department of Medical Oncology at Jefferson Medical College and Thomas Jefferson University Hospital. "The focus is on immunobiology and immunotherapy."

The number of new cases of melanoma in the United States is on the rise, with more than 62,000 cases of melanoma expected this year. About 8,000 people will die of melanoma this year.

"The honor that we received from MHN will facilitate the further expansion of the Melanoma Program at KCC at Jefferson," says Dr. Sato, who is the Director of the Metastatic Uveal Melanoma Program in the Department of Medical Oncology.

A Place for Me

This is a group program for children whose parent or grandparent has cancer. Using art, games, and other activities, children are helped to understand and cope with the diagnosis of cancer in the family. A separate group is held for teenagers and a group for parents and grandparents is held concurrently.

Saturday Nov. 10th 10-1:30pm

For more information call 215-955-8370
Email support-advocacy@kimmelcancercenter.org

Current Topics

A monthly lecture and networking group for people facing all types of cancer before, during and after treatment.

Thursday, Oct. 11, 12:00pm to 1:30pm • ***New Directions in Myeloma Therapy*** Joanne E. Filicko-O'Hara, MD,

Thursday, Nov. 01, 12:00pm to 1:30pm • ***Lung Cancer Awareness, Detection and Treatment*** - Rita Axelrod, MD,

For more information call 215-955-8370
Email support-advocacy@kimmelcancercenter.org

Current Topics
a program for people facing cancer before, during and after treatment

Tribute to Dr. Sato by Halle Katz

Halle Katz is an extraordinary eleven-year-old. While her grandfather Morton Rosen received treatment from Takami Sato, MD, PhD, at the Kimmel Cancer Center at Jefferson for uveal melanoma, a type of eye cancer, she waited anxiously in Norwich, CT, for news. Unfortunately, her grandfather lost his battle with the disease in the summer of 2006. That was when Halle took the initiative to raise money to aid in the fight against cancer.

"My family would always rave about how great, smart, kind, and wonderful Dr. Sato was. I know what a difference Dr. Sato made in my grandpa's life, that is why I want other patients to have that same chance with a great doctor," she says.

Halle began writing a newspaper called the *Norwich Newz*. "With this newspaper, I hope to make a real difference in patients' lives, patients who are struggling with cancer," she said.

She sells subscriptions for $5—though most subscribers donate more—to family, friends, and neighbors. Focusing on this project during the summer when she is out of school, Halle now has subscribers in California, Connecticut, Florida, Massachusetts, New Hampshire, and New York.

"I chose to do a newsletter because I enjoy writing. Most people enjoy reading so I thought it would be a good way to raise money," Halle explains. This year alone, Halle has raised over $700 for Dr. Sato's research. "I hope that new information will be discovered so that cancer will be cured."

The Kimmel Cancer Center would like to thank donors who contributed a few of the many recent gifts made to the KCC at Jefferson for cancer programs.

AstraZeneca, for support of the Kimmel Cancer Center's Educational Programs for Physicians.

Jack and Roseanne Biddulph and the **Patrick S. Biddulph Foundation**, for support of the research of Neal Flomenberg, M.D., through the Bone Marrow Transplant Fund.

C.R. Bard Foundation, Inc., for funding the C.R. Bard Fellowship in Endourology and Laparascopy.

Dietz & Watson, Inc., for supporting the Kimmel Cancer Center at Jefferson's Breast Care Center.

The Epstein Family Foundation, for contributions to the Irwin Nat Pincus Fund for Melanoma Research to support the work of Michael J. Mastrangelo, M.D.

Kenichiro Hasumi, M.D., and the Hasumi International Research Foundation, for supporting an international collaborative study in the development of new cancer immunotherapies.

Jeffrey and Lisa Piemont, for support of the Eye Melanoma Research Fund to support the research of Takami Sato, M.D., Ph.D.

Anton Rosenthal and Ruth E. Ganister, for contributions to the Colon and Rectal Research and Education Fund to support the work of Gerald Isenberg, M.D.

Family and Friends of Susan Sillars, for the Susan Sillars Fund for Pancreatic Cancer Research to support the work of Jonathan Brody, Ph.D.

Robert E. Wegner, for supporting treatment and research in the department of Urology.

Italian Festa!

Esther Casale of Casa Casale with Jen Filla from KCC

On July 21st , 2007, **Casa Casale**, an Italian imports store located in the heart of Peddler's Village, in Lahaska, Pennsylvania, hosted an *Italian Fiesta* and **raised $3,000** for brain tumor research at the Kimmel Cancer Center at Jefferson. "My twin sister Rosemary was diagnosed with meningioma, a benign brain tumor, six years ago and has gone through three brain surgeries. Then last December, my cousin Rick was diagnosed with glioblastoma multiforme, a cancerous brain tumor. After that happened, I felt I needed to act quickly to help," explains Esther Casale.

"Cancer in any form is devastating," Esther said. "I now plan to raise money every year through the gift that God gave me, my store Casa Casale. I am blessed in many ways and I feel the need to contribute to this cause."

Ladies of Port Richmond Breast Cancer Walk-A-Thon

On Sunday, May 20th , 2007 The Ladies of Port Richmond held their 3rd Annual Port Richmond Breast Cancer Walk-A-Thon. Many of the Ladies of Port Richmond are breast cancer survivors who want to do something in their community to help combat the disease that has affected millions of women. Through these walks and other fund-raising activities, the Ladies of Port Richmond have donated over $70,000 to the Kimmel Cancer Center for breast cancer research. They will hold their **Third Annual Community Breakfast for the Kimmel Cancer Center on Sunday, October 7, 2007.**

For more information, call 215-955-8195.

Dr. Pestell is joined in the photo by the Phillies Phanatic and Team Kimmel participants.

Ground Zero Hair Salons

On July 21, 2007, Ground Zero Hair Salons, in partnership with AroundPhilly.com, hosted a Black & White Ball with A Touch of Pink Cocktail Party. All proceeds benefited the Kimmel Cancer Center at Jefferson's Breast Care Center. The cocktail party was held in celebration of Ground Zero's 20th anniversary at the newest Sweat Gym & Ground Zero Center City location at 15th & Arch Streets.

"In honor of our anniversary we decided to throw a party - a *big* party. And in keeping with Ground Zero tradition, we decided to make it a benefit," said Wendy Weinstein, President of Ground Zero Salons, LLC. (featured on the right with Dr. Pestell and Judy Bachman, Senior Vice President for Strategic Initiatives)

"Ground Zero Salons are proud to announce their support of the Kimmel Cancer Center's Breast Care Center. So many of us know someone touched by this horrible disease," she said "It's amazing to think that we can actually help KCC create a great center for breast care."

Watch this Space!

New *Friend of the Kimmel Cancer Center*, Chris Booker of Radio Q102's Booker Show, has been actively promoting the Kimmel Cancer Center. Stay tuned for more events!

Phillies Q102 Tailgate for the Cure to fight breast cancer

The KCC was the beneficiary of the 'Phillies Tailgate for the Cure' on Friday, Sept. 13th before the Phillies took on the Colorado Rockies. The pre-game VIP reception featured Q102's Booker Show, Chris Booker, Phillies' Ballgirls, and Sports personalities.

If you are interested in Clinical Trials, please visit our website www.KimmelCancerCenter.org/trials

For a downloadable copy of Dr. Edith Mitchell's 'A Guide to Clinical Trials for Cancer Patients' simply visit our website www.KimmelCancerCenter.org/DiversityAffairs

We cordially invite you to **The Thyroid Cancer 2007- Advances in the Treatment of Thyroid Nodular Disease & Cancer Conference**. October 26-27, 2007 at the Jefferson Medical College. For more information call 1-888-JEFF-CME

Please join us for the *Concert for the Cure* featuring

Olivia Newton-John

To benefit the

Kimmel Cancer Center at Jefferson

&

The Olivia Newton-John Cancer Centre Appeal

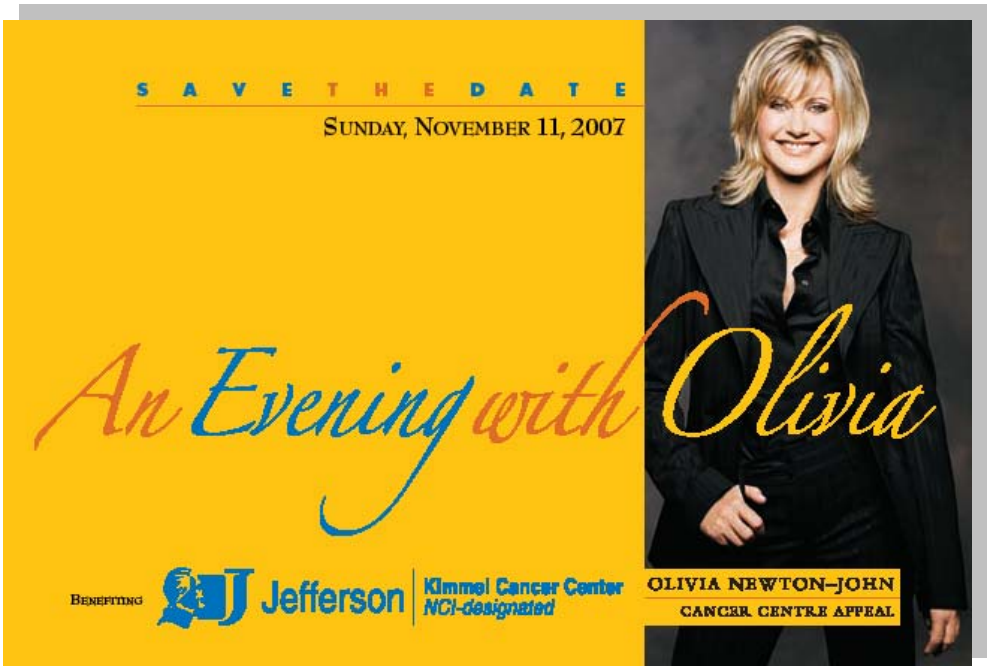
RECEPTION & DINNER WITH OLIVIA @ 5PM

PERFORMANCE @ 8PM

Kimmel Center for the Performing Arts
The Perelman Theatre
260 South Broad Street, Philadelphia

FOR INFORMATION

Please call Jefferson Events
215-955-9100
events@jefferson.edu



A Celebration of Life

More than 200 cancer survivors, families, caregivers and friends gathered for The Kimmel Cancer Center at Jefferson's *8th Annual Celebration of Life,* on June 7, 2007.

The interactive health expo showcased our **Jefferson-Myrna Brind Center for Integrative Medicine** and **Jefferson's Breast Care Center**. Community organizations including The American Cancer Society, Living Beyond Breast Cancer, The Wellness Community of Philadelphia, Leukemia & Lymphoma Society, Center for Advancement of Cancer Education, Women's Health Institute, Yellow Daffodils, and Whole Foods joined our cancer survivors, who exhibited their paintings, photography, sculpture and poetry.

This special event featured a musical concert by two artists, Lidia Kaminska and Jose Franch-Ballester, from Astral Artistic Services for promising young musicians.

Dr. Richard G. Pestell, MD, PhD, the Kimmel Cancer Center Director, spoke about long-term survivorship programs and poetry, followed by personal stories of survivorship by Dr. Matthew V. DeCaro, MD, Gerald 'Buddy' Leo and June White. "We believe that patients diagnosed with cancer for the first time are confronted with a life-shattering experience. Art, sculpture, music and poetry can help the individual reconstruct their life into a deeper and more fulfilling experience of the world around them" says Dr. Pestell.

1. Top Left : Artist Ashley Burden With Aunt Caryn Jordan, Breast Cancer Survivor.
2. David Weisberg, Non Hodgkin's Lymphoma Survivor with his Sculpture.
3. Lidia Kaminska, Accordion and Jose Franch-Ballester, Clarinet
4. Anita Cordero-Krohn, Jefferson Employee
5. Gerald Leo, Dr Matthew DeCaro, June White, Dr Pestell, Joy Soleiman

Kimmel Cancer Center at Jefferson
NCI-designated

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University and Hospital

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