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○ SPRING | ○ 2011

# MARKEY *quarterly*

SEASONAL NEWS FOR  
MARKEY CANCER CENTER  
FACULTY AND STAFF

## RECORD-BREAKING RESEARCH DAY



**Kyle Fugit** presents his poster to **Dr. Craig Horbinski**, who was a judge at this year's event.

This year's Markey Cancer Center Research Day draws 325 registrants (100 more than 2010), 117 poster displays, and local media attention

Markey Cancer Center Research Day has been an established event for three years, but this year's version pointed to significant growth for the one-day event.

Record numbers of posters and attendees filled the Singletary Center on March 22. The day featured two faculty presentations, from Dr. John van Nagell and Dr. Binhua P. Zhou. Two graduate students, Tianxin Yu and Timothy Scott, were also selected to present their research.

The capstone of the day was Dr. Mark Evers' State of the Cancer Center address (see highlights on page 2), followed by the Susan B.

Lester Memorial Lecture given by invited speaker Dr. Tyler Jacks from the Massachusetts Institute of Technology.

Four awards in each of two categories (basic and clinical/translational research) were given to the best graduate student and post-doctoral presentations as judged by faculty.

Cancer Research Day also received a significant amount of attention from local media outlets, including the Lexington Herald-Leader, the Kentucky Kernel, WTVQ-TV and WEKU-FM.

## MARKEY BY THE NUMBERS

Markey Difference Makers recognized in the first two quarters of the award's existence . . . . . 50

Faculty selected to give oral presentations at Markey Cancer Center Research Day . . . . . 2



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Stethoscope image at top of page: zirconicusso / FreeDigitalPhotos.net

# FROM THE DIRECTOR

B. MARK EVERS, MD, DIRECTOR, MARKEY CANCER CENTER



This year, our cancer center has experienced a tremendous and exciting amount of growth, and that message was one I had the pleasure of sharing with our entire community at this year’s Markey Cancer Center Research Day. For our center, 2010 was truly a year of expansion and exciting opportunities.

The dedication of our clinical team members is evident in the growth of four key patient visit areas: outpatient cancer visits, outpatient chemotherapy visits, radiation medicine treatment visits and new patient clinic visits. The number of chemotherapy visits has almost tripled over five years, and we have seen the number of new patient visits double over the same timeframe. We also introduced some other improvements to our patients’ experiences. Thanks in part to recommendations made by our own Patient Advisory Group, and through a generous grant from The Lexington Cancer Foundation, we added a Jin Shin Jyutsu therapy program managed by Jennifer Bradley. We have also welcomed a new American Cancer Society patient navigator (meet Melanie Wilson on page 4), and a nutrition program which features a popular dietary blog called Markey Menu, written by Karina Christopher.

Another achievement I’m proud of is our growth in terms of research grants awarded. Our award totals rose from \$31.5 million in 2009 to a total of \$36.3 million in 2010. Funding from the National Cancer Institute (NCI) also increased, which is a significant marker for the vibrancy of our researchers and laboratory capabilities.

I would also like to welcome our new recruits, notably Dennie Jones, MD, who comes to us from the University of New Mexico’s cancer center. Dr. Jones will be taking on some clinical responsibilities, but also will work with our own affiliate network. His title is Director of Markey Cancer Center Affiliate Network and Deputy Director for Clinical Outreach, Research and Education, and he will also hold a faculty position in the Department of Internal Medicine.

In closing, there is a huge amount of momentum and excitement in the Markey Cancer Center. I am proud of all of the accomplishments and hard work by everyone in the center. Your hard work and dedication through research and clinical care is making a difference in the many patients that we treat throughout the Commonwealth and beyond. Keep up the good work!



## Spring fundraisers raise nearly \$700,000 for fight against cancer

Campus and local communities turned out to raise money for Markey research and cancer awareness in a variety of ways this season

Whether it was students dancing for 24 straight hours, contributing \$5 to wear blue shirts and blue jeans to work on a Friday, or wearing pink to a UK gymnastics home meet, we’ve had a variety of ways to participate in fundraisers this spring.

DanceBlue contributions reached a record level this year, totaling \$673,976.60. Participants completed the round-the-clock dance marathon on February 18 and 19. Proceeds were donated to the Golden Matrix Fund and the UK Pediatric Oncology Clinic.

Dress in Blue Day, held March 4, allowed the campus community the chance to contribute \$5 toward Markey’s Colon Cancer Prevention and Awareness Program. See pictures on Markey’s Facebook page.

The UK Gymnastics Pink Meet, held February 25, was the team’s final home meet of the season. Attendees were asked to wear pink to the meet for a discounted ticket price, and early-arriving fans were given gifts ranging from backpacks to feather pens and pink cosmetic bags.

### AMOUNTS RAISED

**DanceBlue**  
\$673,976.60

**Dress in Blue Day**  
\$2,174.90

**UK Gymnastics Pink Meet**  
\$1,911

### TELL US ABOUT IT

Do you have an idea for a future edition of Markey Quarterly? A picture you’d like to see included? Email Markey’s Research Communications Office ([mccrco@uky.edu](mailto:mccrco@uky.edu)) with your story idea.

# MEET A MARKEY MOVER

MELANIE WILSON, PATIENT NAVIGATOR

This quarter, Markey Quarterly introduces you to Melanie Wilson, the patient navigator in a new program by the ACS, supported by AstraZeneca.

**Hi Melanie. What is your background? Where did you go to school? Where are you originally from?**

I'm originally from Madisonville, Ky. I graduated from Western Kentucky University, and most recently became a certified patient navigator through the Harold P. Freeman Institute for Patient Navigation. I moved to Lexington from Nashville, Tenn., in 2006, where I began my career with the American Cancer Society as an Evening Manager at the Hope Lodge.

**What do you think is the biggest impact the patient navigator program will have at Markey?**

My hope for the program is that it will help patients focus on getting well by providing support every step of the way, from ensuring patients have transportation to and from treatment and providing valuable resources such as where a patient might obtain a wig or head covering at no cost to simply lending an ear to listen. Often, I find patients just need someone to talk to and to know that someone genuinely cares about what they're going through.

**What can your fellow staff members do to make the program successful?**

Everyone has been very supportive of the navigator program. I guess I would just encourage individuals to feel free to ask me any questions they might have about the program and continue to inform patients of this valuable service available to them.

**What are the most common requests you expect to get from patients?**

Transportation assistance, hands down. With gas prices soaring, transportation has become an even greater issue than it has been in the past. I've also been utilizing the Hope Lodge quite a bit for individuals with multiple appointments throughout the week to ultimately help reduce fuel costs.

**This program is the first of its kind in Kentucky. Many patients, and perhaps many of their doctors and caregivers, may not have dealt with anything similar before. What should they know about the program and getting involved?**

The American Cancer Society Patient Navigator Program, formally launched in 2005, links individuals affected by cancer



to patient navigators who serve as personal guides for patients and their caregivers with a focus on eliminating barriers to cancer care for the medically underserved. A unique part of the process involves a follow-up call approximately two weeks after the initial contact with the patient to check on them and ensure that the services, resources, etc., provided were actually helpful and to see if they need additional assistance. The responses I've received have been overwhelmingly positive. Patients have expressed a heartfelt, genuine appreciation for the follow-up call. I think it's the little things in life that often times mean so much.

**Now for the fun stuff. What do you like to do when you're away from work?**

I'm a huge animal lover. I have 2 cats and a beagle, who are all rescue animals. Molly, my beagle, and I frequent the dog park. I also enjoy tailgating at UK football games and traveling.

**What's your favorite meal?**

I love Jason's Deli! There's not one in Lexington but I'm hoping we'll get one someday.

**What's your favorite song?**

It changes often... currently it's The Cave by Mumford & Sons but anything by The Beatles or Kings of Leon is okay in my book.

**OK, last one: What was the last movie you watched?**

Winter's Bone, and I thought it was terribly depressing. My favorite movie of all time is It's a Wonderful Life. I've seen it a hundred times and I still cry at the end.



# NOTEWORTHY

## WELCOME

**Margaret Szabunio, MD**, Chief, Division of Women's Radiology

**Qaiser Niaz, MD**, assistant professor, Department of Internal Medicine

**Dennie Jones, MD**, Director of Markey Cancer Center Affiliate Network, deputy director for Clinical Outreach, Research and Education and professor, Department of Internal Medicine

## PRESENTATIONS & PUBLICATIONS

Congratulations to Markey members for publishing 46 manuscripts in peer-reviewed journals in January, February and March.

## GRANTS

**Thomas Tucker, PhD, MPH**, associate director for Cancer Prevention and Control in the UK Cancer Control Program at the Markey Cancer Center, was awarded a total of \$976,449 for fiscal year 2011 as part of a two-year, ten-month grant totaling \$976,449 from Macro International Company for "ARRA: Enhancing Cancer Registry Data for Comparative Effectiveness Research Increased Electronic Reporting Through Electronic Health Records at Non-Hospital Provider Settings."

**Daret St. Clair, PhD**, professor in the Graduate Center for Toxicology, was awarded a total of \$401,390 for fiscal year 2011 as part of a five-year grant totaling \$2,047,987 from the National Cancer Institute for "Rel B Mediated-Redox Regulation of Radiation Therapy."

**Joseph Zwischenberger, MD**, professor and chair of Surgery and UK HealthCare surgeon-in-chief, was awarded a total of \$213,597 for fiscal year 2011 as part of a nine-month grant from MC3, Inc. for "Development of a Perfusion-Induced Systemic Hyperthermia Delivery Apparatus."

**Vivek Rangnekar, PhD**, professor of Microbiology, Immunology and Molecular Genetics and Radiation Medicine, was awarded a total of \$150,000 for fiscal year 2011 as part of a two-year grant totaling \$150,000 from Kentucky Lung Cancer Research Fund for "Activation of the Par-4 Extrinsic Pathway for Suppression of Lung Cancer."

**Zhigang Wang, PhD**, professor in the Graduate Center for Toxicology, was awarded a total of \$150,000 for fiscal year 2011 as part of a two-year grant totaling \$150,000 from Kentucky Lung Cancer Research Fund for "Rev1 and Carcinogen-Induced Lung Cancer."

**Binhua Zhou, MD, PhD**, associate professor of Molecular and Cellular Biochemistry, was awarded a total of \$125,842 for fiscal year 2011 as part of a two-year grant totaling \$125,842 from US Army Medical Research and Materiel Command for "BHC80 is Critical in Suppression of Snail-LSD1 Interaction and Breast Cancer Metastasis." This project will serve as the predoctoral fellowship for Yiwei Lin.

**B. Mark Evers, MD**, director of the Markey Cancer Center and professor of Surgery, was awarded a total of \$49,504 for fiscal year 2011 as part of a one-year grant from The Lexington Cancer Foundation for "Integrative Medicine and Cancer Using Jin Shin Jyutstsu."

**Mark Dignan, PhD, MPH**, professor of Internal Medicine, was awarded a total of \$1,280,345 for fiscal year 2011 as part of a five-year grant totaling \$6,503,314 from the National Cancer Institute for "Appalachia Community Cancer Network II - Centers for Reducing Cancer Disparities (U54)."

**Natasha Kyprianou, PhD**, professor of Surgery, was awarded a total of \$366,643 for fiscal year 2011 as part of a four-year grant totaling \$1,277,530 from National Institute of Diabetes and Digestive and Kidney Diseases for "Novel Effectors of TGF- $\beta$  Signaling in Prostate Growth Regulation and Tumor Progression."

## AWARDS, RECOGNITIONS & SELECTIONS

*Congratulations and thank you to the following employees, who will be given a UK College of Medicine service award in June for their years of service:*

### *Five Years of Service*

Xandria Berry, Mindi Haley, June Clopein, Dorothy Edwards, Terry Keys

### *Ten Years of Service*

Rebecca Bruno, William Campbell, Pamela Simpson-Shaw, Jeri Reynolds, Donna Gilbreath

### *Fifteen Years of Service*

Kay Diane Frasure, Jeffery Boyles

### *Twenty Years of Service*

Mary Byrne

### *Twenty-Five Years of Service*

Marilyn Wooten, Michael Green, Teresa Knifley

**Daret St. Clair, PhD**, was awarded the 2011 Albert D. & Elizabeth H. Kirwan Memorial Prize for outstanding contributions to original research.

Congratulations to **Laura Wright**, this year's Clinical Nurse Excellence Winner. Roger Yankey, Mary Ryles and Grace Puckett were Clinical Nurse Excellence nominees.

# RESEARCH UPDATE

DARET ST. CLAIR, PhD

Prostate cancer is the second leading cause of cancer death among U.S. men. The clinical and experimental data of several studies indicate that oxidative stress resulting from high levels of reactive oxygen species (ROS) is inherent in prostate cancer cells and is required for aggressive phenotypes. ROS has been implicated as a second messenger in regulating gene expression. Among the various ROS-sensitive transcription factors, NF-κB is particularly sensitive to cellular redox changes. The effect of NF-κB activation on a target gene is dependent on the local structure and accessibility of the NF-κB binding sites in the promoter/enhancer of the target gene. Many studies have focused on the role of the NF-κB classical pathway in the process of cancer development and cancer cell resistance to chemo- and radio-therapy. However, there is little known about the role of the NF-κB alternative pathway in cancer development. High constitutive nuclear levels of RelB, a member of the NF-κB alternative pathway, have been observed in aggressive prostate cancer cells and human prostate cancer

specimens with high Gleason scores, but whether these high levels contribute to tumorigenesis of prostate cancer is unknown.

Recently, we performed the first study to address the role of RelB in solid tumors. We used multiple approaches to establish that RelB is critical for tumorigenesis of prostate cancer. Serendipitously, we also have found that in animals bearing RelB-overexpressed prostate tumors, the circulating levels of IL-8 were increased but the levels of PSA were decreased while the tumor was progressing to a more aggressive phenotype. The results demonstrate that IL-8 is a potential molecular marker for the progression of prostate cancer to androgen insensitivity. Thus, clinical testing for recurrent tumor growth may benefit from measuring levels of IL-8 in addition to employing the standard PSA test. Combining these tests may enhance accurate cancer detection and prognosis. This possibility is being investigated in a clinical setting by a prostate cancer treatment team at the Markey Cancer Center that includes a Radiation Oncologist (Dr. William St. Clair), a Urologist (Dr. Paul Crispen), and a Medical Oncologist (Dr. John Rinehart) with the goal of improving detection, treatment planning, and care of prostate cancer patients.

# CLINICAL UPDATE

HEPATOBIILIARY TUMOR PROGRAM

SHAUN MCKENZIE, MD

In an effort to continue to provide focused multidisciplinary care, the Liver Cancer Program meeting will now be an integral part of the upper GI/multidisciplinary group of the cancer center. Representation from 11 subspecialties will be present to coordinate individualized cancer care. The Liver Cancer

Program is developing a radioembolization protocol to enhance our current liver-directed therapies for unresectable hepatic malignancies. This technology broadens our armamentarium against liver tumors.

Finally, we are currently accruing patients for multi-institutional randomized trials for both resectable pancreatic cancer and advanced hepatocellular cancer. We have launched an aggressive outreach campaign to promote our upper GI and liver cancer programs to outside oncologists and gastroenterologists in the region.



**Dr. Patricia Donahoe** (right) from the Harvard Stem Cell Institute, visits with UK's **Dr. Jacqueline Noonan** (left) on March 3. Dr. Donahoe presented the College of Medicine Dean's Distinguished Lecture on the role of Mullerian inhibiting substance and chemotherapeutic agents in the stem cell and immune biology of ovarian cancer.

# MARKEY DIFFERENCE MAKERS

Congratulations to the following Markey Difference Makers, and to quarterly recipients Elizabeth Escobedo and Dr. Lewis Kelly.

- |                    |                   |                   |
|--------------------|-------------------|-------------------|
| Susanne Arnold     | Rhonda Gillam     | Gay McGarey       |
| Marcia Ballard     | Cindy Glenn       | Peggy Meece       |
| Cathy Bannon       | Earl Gorham       | Jessica Meniffee  |
| Michelle Carroll-  | Reda Gray         | Stephanie Mullins |
| Kubajak            | Kim Haire         | Hetal Patel       |
| Farrah Cates       | Joy Haney         | Carla Repass      |
| Katie Chapman      | Sarah Hines       | Stacy Richey      |
| Karina Christopher | Virginia Hodskins | Dr. Edward Romond |
| Almita Cummins     | Dianna Howard     | Mary Ryles        |
| Sandra Earles      | Terry Huey        | Sharon Schimmel   |
| Samantha Eddington | Michelle Ireland  | Stacy Stanifer    |
| Alexandria Elkins  | Crystal Kendrick  | Nathan Vanderford |
| Mark Filburn       | Terry Keys        | Edna Ware         |
| Robin Fisher       | Sarah Lail        | Robbin Washington |
| Lori Fritz         | Jill Lee          | Roger Yankey      |
| Richard Gibbs      | Yiwel Lin         | Stephanie Zebosky |
| Donna Gilbreath    | Judy Malone       | Kathi Zeller      |