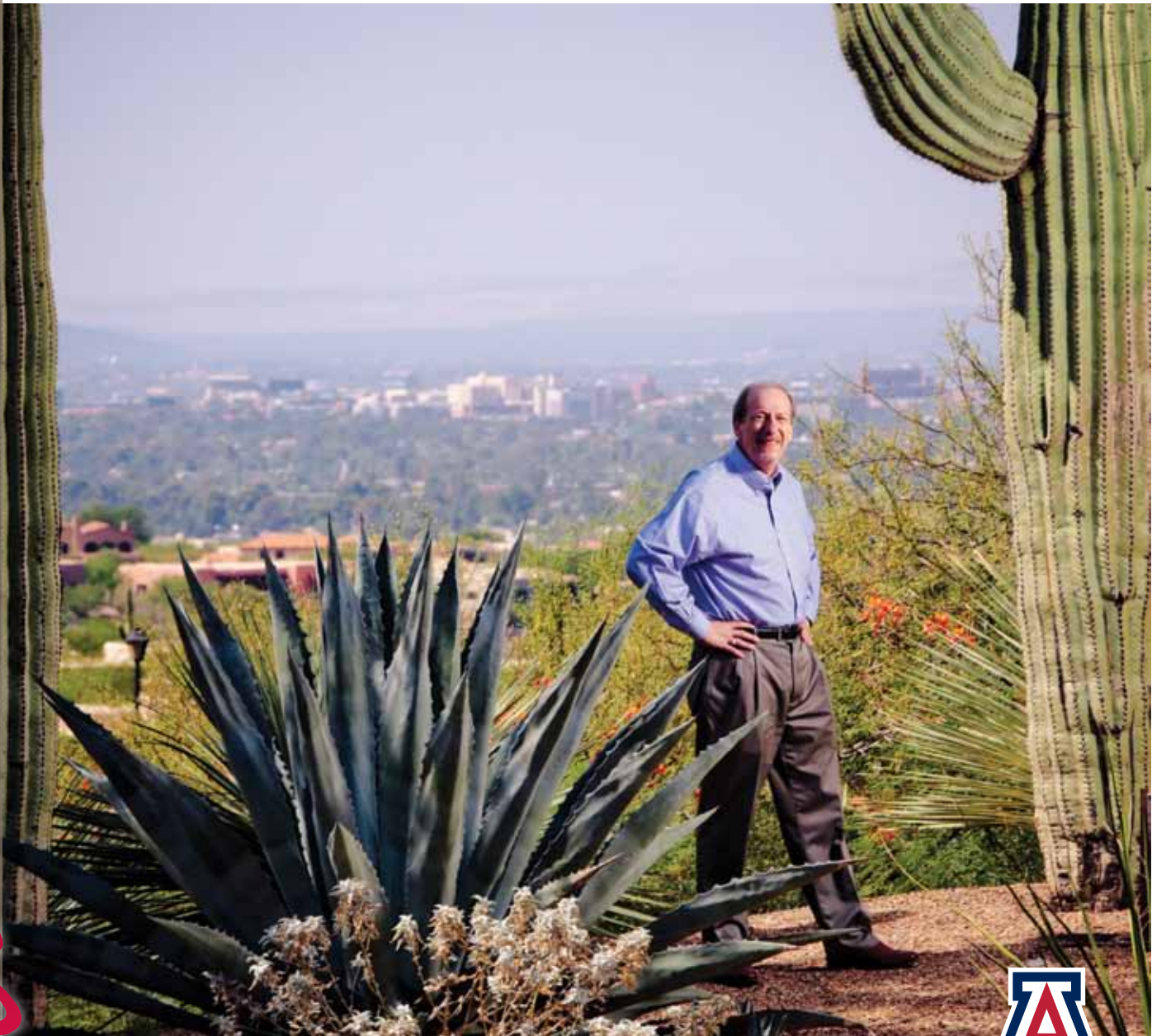


*Act* AGAINST CANCER™



A publication of the University of Arizona Cancer Center

Fall 2014



# A Note *to* our Readers

Welcome to the fall edition of Act Against Cancer, our publication that focuses on the University of Arizona Cancer Center's many efforts to prevent and cure cancer.

This issue marks a momentous occasion in the UACC's 38-year history, as Andrew S. Kraft, MD, has been named the new Cancer Center Director. Dr. Kraft takes over for Anne E. Cress, PhD, who has served as interim director since July 2013.

Dr. Kraft is an accomplished prostate cancer researcher and developer of novel cancer drugs who plans to position the UA Cancer Center at the cutting edge of personalized, targeted medicine through a collaborative, multi-specialty approach and an increased effort to bolster the UACC's clinical trials program.

Also in this issue, the husband-and-wife research team of Donato Romagnolo, PhD, MSc, and Ornella Selmin, PhD, is investigating a potentially groundbreaking genetic marker that could lead to more targeted therapies for previously untreatable breast cancer cases. We also pay tribute to the wonderful Phoenix Friends of the UACC, who held their annual gala in March.

Thank you for your continued support of the University of Arizona Cancer Center.

## On the cover:

Andrew S. Kraft, MD, a nationally recognized prostate cancer physician-scientist and cancer center administrator, is the new UA Cancer Center Director.

**The University of Arizona Cancer Center is a Comprehensive Cancer Center designated by the National Cancer Institute**

Produced by the Office of Public Affairs  
Public Affairs Director ~ Sara Hammond  
Associate Editor ~ Nick Prevenas  
Designer ~ Kayla Coe, MA  
Printer ~ AlphaGraphics CPS

*The media is welcome to quote from this publication and is asked to provide credit.*

*Correspondence or inquiries should be addressed to:*

The University of Arizona Cancer Center  
Office of Public Affairs  
1515 N. Campbell Ave.

P.O. Box 245024

Tucson, AZ 85724-5024

e-mail: [azcc@azcc.arizona.edu](mailto:azcc@azcc.arizona.edu)

All contents © 2014 Arizona Board of Regents.

The University of Arizona is an EEO/AA - M/W/D/V Employer.

[arizonacancercenter.org](http://arizonacancercenter.org)

## Contents

3	Science as Art	10	Raising More Than Hope
4-7	Full Circle	11	News & Notes
8-9	A Perfect Union		



### “Cartwheel” – Dr. Gregory Rogers’ lab

Although centrosome amplification can promote chromosomal instability (CIN), the presence of too many centrosomes can also ignite a burst spindle microtubule assembly (red), chromosome misalignment (green), and mitotic catastrophe that results in cell death.



## Full Circle

By Nick Prevenas

*Andrew S. Kraft, MD, is the new Director of the University of Arizona Cancer Center*



Photos: David Sanders

Things have come full circle for Andrew S. Kraft, MD.

After completing his internal medicine residency at New York's Mount Sinai Hospital in 1978, Dr. Kraft knew he wanted to join the endlessly fascinating field of cancer research.

"There was never a question in my mind as to what I was going to do," Dr. Kraft said.

Dr. Kraft developed an interest in cell growth and differentiation as an undergraduate student at Bucknell University. He wanted to find the most effective, efficient ways to take his laboratory discoveries to the clinic, where they could provide the greatest benefit to patients.

Around this time on the other side of the country, a brilliant, one-of-a-kind thinker settled into Tucson, Arizona, and made a difference in the way cancer was approached and treated. Sydney E. Salmon, MD, was one of the most charismatic, innovative figures in the scientific research community – the kind of person everyone gravitated toward.

"I knew Dr. Salmon the way everyone knew Dr. Salmon," Dr. Kraft said. "He was an inspiration to all of us at that time."

In fact, Dr. Kraft applied for a fellowship at the University of Arizona Cancer Center in hopes of working alongside Dr. Salmon, the Cancer Center's founding director. Even though Dr. Kraft elected to stay on closer to home and pursue the fellowship program at the National Cancer Institute (NCI), in

Bethesda, Maryland, he admired Dr. Salmon and the work that took place in Tucson.

Now, more than three decades later, Dr. Kraft takes over as the Director of the University of Arizona Cancer Center.

Dr. Kraft, a nationally recognized prostate cancer physician-scientist and cancer center administrator, also has been named the Sydney E. Salmon endowed chair and Associate Vice President for Oncology Programs for the University of Arizona Health Sciences Center. In addition to his Cancer Center leadership role, Dr. Kraft joins the University as tenured Professor of Medicine in the Department of Medicine, Division of Hematology/Oncology and Senior Associate Dean for Translational Research in the College of Medicine. A practicing clinical oncologist with a clinical research focus on sarcoma and genitourinary cancers, he is board certified in internal medicine and oncology.

Recruited to the Medical University of South Carolina in 2004, Dr. Kraft led the Hollings Cancer Center's efforts to become an NCI-designated Cancer Center. Under Dr. Kraft's leadership, Hollings attained its NCI designation in 2009, a distinction shared by only 67 other cancer centers in the United States.

"We are pleased to welcome a physician-scientist of Dr. Kraft's caliber to lead our NCI-designated comprehensive cancer center," said Joe G.N. "Skip" Garcia, MD, UA senior vice president for health sciences and interim dean of the

*"There was never a question in my mind as to what I was going to do."*

*~ Andrew S. Kraft, MD*

UA College of Medicine – Tucson. “Dr. Kraft’s strengths include developing and implementing clinical trials, recruiting outstanding faculty and successfully shepherding the construction of cancer center facilities – all important needs for the UACC.”

At UACC, Dr. Kraft will have overall responsibility for the Center’s \$35 million research portfolio and oversight of oncology clinical operations in Tucson, in partnership with the University of Arizona Health Network. He also will oversee the development and implementation of the clinical and clinical research operations at the new UACC facility in Phoenix in collaboration with Dignity Health/St. Joseph’s Hospital and Medical Center. This new facility is slated for completion in summer 2015.

Among his top priorities as UACC Director will be to expand and strengthen the clinical trials program. Dr. Kraft wants to spearhead innovation and increase enrollment in order to re-establish the UACC as one of the world’s most cutting-edge research facilities.

How does he plan on doing that? Awareness.

“At Hollings, we made sure all of our researchers and clinicians communicated openly about clinical trials, while applying that same attitude of openness and enthusiasm when discussing treatment options with patients,” Dr. Kraft said. “We want to make sure people — from patients to physicians to the scientific

research community — think of the University of Arizona Cancer Center when they think of clinical trials.”

Accomplished in developing novel scientific and clinical programs to attack and cure cancer, Dr. Kraft fosters collaboration by establishing committees of fellow scientists and physicians to develop unique research approaches to cancer diagnostics and therapeutics. He plans to bring that same sort of framework for collaboration to Tucson.

Dr. Kraft has been a longtime admirer of the UACC’s Cancer Prevention and Control Program — one of the largest and most accomplished programs of its kind. He believes prevention and targeted therapies will continue to serve as the foundation for the Cancer Center’s future success, as he looks to expand its research portfolio and establish the UACC as the Southwest’s thought leader in cutting-edge cancer care.

“I believe it is a very exciting time, both for the University of Arizona Cancer Center, and for cancer research as a whole,” Dr. Kraft said. “We’re entering a new era of personalized medicine, and we’re in a unique position where we can take these exciting discoveries and apply them in the clinic, saving lives in the process.”

*“I believe it is a very exciting time, both for the University of Arizona Cancer Center, and for cancer research as a whole.”*

*~ Andrew S. Kraft, MD*

## Dr. Kraft’s Background

Prior to his appointment at MUSC, Dr. Kraft was chief of the Division of Medical Oncology at the University of Colorado Health Sciences Center; prior to that, he was associate director of the Division of Hematology/Oncology at the University of Alabama at Birmingham. He received his medical degree from the University of Pennsylvania, completed an internship and residency at The Mount Sinai Hospital in New York, and was a research fellow in the Laboratory of Pathophysiology and a clinical fellow at the National Cancer Institute.

Dr. Kraft is an elected member of the Association of American Physicians and the American Society of Clinical Investigation. He also is a member of the American Association for Cancer Research, the American Society of Hematology and the American Society of Biologic Chemists. During his career, he has mentored 37 post-doctoral fellows.

## Career Highlights

*He is an accomplished prostate cancer researcher and developer of novel cancer drugs.*

*His research has continuously been funded since 1990 by the National Cancer Institute, the U.S. Department of Defense and the Prostate Cancer Research Foundation.*

*He has more than 130 publications in peer-reviewed journals.*

*He is an accomplished fundraiser, responsible for \$49 million in philanthropy over the last five years at Hollings Cancer Center.*

*He successfully gained federal support to expand the Hollings Cancer Center Disparities Program.*

*At the Medical University of South Carolina, he recruited 60 outstanding translational and basic cancer research and clinical faculty members.*

*He oversaw development of the Cancer Center and in four years achieved full NCI designation.*





# A Perfect Union

By Nick Prevenas

*Roughly 5 to 10 percent of breast cancer diagnoses are a direct result of an inherited mutation on the BRCA1/BRCA2 genes. But what is causing the other 90 percent?*



Photo: David Sanders

Donato Romagnolo, PhD, MSc, and Ornella Selmin, PhD, are investigating a potentially groundbreaking genetic marker that could lead to more targeted therapies for previously untreatable breast cancer cases.

“We want to figure out what could possibly be responsible for the large percentage of breast cancer cases where patients have no family history of the disease but have lower or no detectable BRCA1,” Dr. Romagnolo said.

The BRCA1/BRCA2 mutation made headlines worldwide when actress Angelina Jolie wrote about her experiences with her inherited genetic condition in 2013. Yet one thing nearly all breast cancer cases have in common is reduced expression in these genes, even if there is no inherited mutation or familial history with breast cancer.

Drs. Romagnolo and Selmin believe that the common link between these non-inherited breast cancer cases lies within the aryl hydrocarbon receptor (AhR), a gene that has been shown to repress BRCA1 expression when it encounters environmental pollution, a high-fat diet, or prolonged exposure to ultra-violet rays.

The roots of this study date back to the mid-1980s, when these two research scientists fell in love and got married in 1985.

The husband-and-wife duo eventually made their way to the National Institute of Environmental Health Sciences. Dr. Romagnolo was a nutritionist studying the BRCA1 gene, while Dr. Selmin was a molecular biologist researching AhR.

“It was a perfect union,” Dr. Romagnolo said.

They each arrived at the University of Arizona Cancer Center in 1997 and began researching the links between AhR and breast cancer with their first successfully funded grant in 1999 through the US Department of Defense (DoD), which established the Breast Cancer Research Program in 1992 to promote innovative research focused on eradicating breast cancer.

Drs. Romagnolo and Selmin hold faculty appointments in the Department of Nutritional Sciences, College and Agriculture of Life Sciences and share a laboratory at the University of Arizona Cancer Center.

Drs. Romagnolo and Selmin are among the only researchers investigating this potential link. Earlier this year, their research received the highly sought-after Idea Expansion Award — a three-year, \$560,000 grant to assist Dr. Romagnolo’s lab with setting up protocols and genetic models for the next phase of this study.

The DoD received more than 130 applications for Idea Expansion Awards, but issued only eight awards. Impact is the most important aspect of the Idea Expansion Award. Research that has the potential to significantly accelerate the eradication of breast cancer is considered to have high impact.

“We’re still not sure if AhR is the cause or the effect — whether it’s driving the lower BRCA1 expression, or if it’s simply a passenger in a larger, more complex series of events,” Dr. Romagnolo said. “But we do know AhR is involved.”

The ultimate goal of this study is to determine whether AhR can serve as a genetic marker to develop the first targeted therapies for triple-negative breast cancer— providing safer, more effective treatments for a disease that claims more than 40,000 lives each year.

Last year, Drs. Romagnolo and Selmin (along with research technician Jamie L. Borg, and former Nutritional Sciences doctoral student Andreas Papoutsis) published a paper in the journal *Molecular Carcinogenesis*, suggesting that these external environmental and dietary factors in pregnant women may have an impact on future breast cancer risk for the offspring, as well.

“We’re on the cusp of a major discovery,” Dr. Romagnolo said. “We know the gene’s blueprint, and we know the risk factors. The next step is to turn these findings into life-saving therapies.”

*“We’re on the cusp of a major discovery.” ~ Donato Romagnolo, PhD, MSc*



# Raising More Than Hope



On March 29, The Phoenix Friends of the Arizona Cancer Center hosted “An Evening with the Friends,” a lavish event held at The Scottsdale Resort and Conference Center that raised \$250,000 to support cancer research.

For 28 years, these amazing, energetic women have brought their friends and the community together to raise money for cancer research.

This year’s theme: “Raising More Than Hope.”

With nearly 400 people in attendance, everyone enjoyed a wonderful evening of dinner and dancing with a spectacular silent and live auction — which included a fabulous trip to Scotland.

*It is said that the flight of a butterfly can change*

*weather around the world;*

*You are each butterflies....*

*You are changing the world;*

*You are curing cancer*



# News & Notes from *the* UACC

## LEADERSHIP

**Rick Kittles, PhD**, a national leader on cancer health disparities and the role of genes and environment in disease, and a pioneer in DNA testing to trace the ancestry of African Americans, has been appointed director of the new Division of Population Genetics, part of the new Center for Applied Genetics at the Arizona Health Sciences Center at the University of Arizona.

Dr. Kittles is a National Institutes of Health-funded investigator whose research program and scientific expertise will support UA Health Sciences strategic initiatives in health disparities and precision health. He also is a member of the University of Arizona Cancer Center and the center’s Cancer Prevention and Control Program.

“In terms of medicine, we recognize more and more that one size does not fit all. Many variables play a role in effective risk assessment, drug response and treatment outcomes across different populations. The Division of Population Genetics will provide important genomic information from populations,” Dr. Kittles said.

## EDUCATION

*iVIDA!* The Ninth Annual Mujer Latina Breast Cancer Conference features new workshops on navigating the Affordable Care Act, young breast cancer survivorship, diet and wellness, patient-directed care, and an extensive educational program on breast health delivered in both Spanish and English.

In collaboration with the Arizona Telemedicine Program, Hope Matters Breast Cancer Foundation, Mariposa Community Health Center, the US-Mexico Border Health Commission, and Susan G. Komen of Southern Arizona, the event hopes to bring together breast cancer survivors as well as all Latinas interested in learning more about breast health and breast cancer.

- **Saturday, Oct. 18, from 8 a.m. to 1 p.m.**
- El Pueblo Community Center – 101 W. Irvington Rd., Tucson.
- Free admission, complimentary breakfast, lunch, and entertainment.
- Advanced registration suggested at [vida.arizona.edu](http://vida.arizona.edu), or by phone at (520) 626-9103.

## AWARENESS

The fifth annual Melanoma Walk will be held on Saturday, Nov. 1 at the University of Arizona Cancer Center - North Campus at 3838 N. Campbell Avenue, Tucson.

The event takes place from 2-6 p.m., with skin screenings offered from 2-4 p.m. (by appointment only beginning Sept 15). The family- and dog-friendly 1.5-mile walk begins at 4 p.m.

There will be fundraising prizes and giveaways, a silent auction, educational activities for kids, and goody bags and food for registered participants.

Founded in 2005, the Skin Cancer Institute at the University of Arizona Cancer Center is the only skin cancer organization of its kind that unites patient care, research, outreach and education into one coordinated entity. For more information, visit [fightmelanomatoday.org](http://fightmelanomatoday.org).

To view more news & notes from the UACC, go to: [azcc.arizona.edu/news](http://azcc.arizona.edu/news)



**The University of Arizona  
Cancer Center**  
1515 N. Campbell Ave.  
P.O. Box 245013  
Tucson, AZ 85724-5013

---

NONPROFIT ORG  
US POSTAGE  
PAID  
TUCSON AZ  
PERMIT NO 190

---



## Your Impact

With your support, the University of Arizona Cancer Center (UACC) can fund new research initiatives as they emerge and accelerate our ability to prevent, detect and treat cancer.

Giving to the UACC provides opportunities for discovery, promotes education and enables our scientists and physicians to expand hope. Help us achieve these essential goals by choosing to become a partner. Together, we can save and change lives.

*For more information, please contact (800) 327-2873  
or send an e-mail to [development@uacc.arizona.edu](mailto:development@uacc.arizona.edu).*