News from the University of Arizona Cancer Center

Our mission is to prevent and to cure cancer.

Monthly News & Updates - June 2016
Douglas Mom Prepares for the 'Fight of Her Life'

Arizona Week featured a UACC patient who is battling breast cancer.

Our very own Pavani Chalasani, MD, discusses the challenges surrounding breast cancer.

Watch the Full Episode

CONGRATULATIONS to Our Graduates in the Cancer Biology Graduate Interdisciplinary Program!
Georg Wondrak, PhD, New President of American Society for Photobiology

The American Society for Photobiology (ASP) is a scientific society for the promotion of research in photobiology, integration of different photobiology disciplines, dissemination of photobiology knowledge, and provides information on photobiological aspects of national and international issues.

The society was formed in 1972 and held its inaugural meeting on Sunday June 10, 1973 in Sarasota, Florida under the presidency of founder Kendric C. Smith.

The society publishes *Photochemistry and Photobiology* as its official journal. Other publications include the free online textbook, *Photobiological Sciences Online*. 
New *Mediterranean Diet* Book Published by Donato Romagnolo, PhD, and Ornella Selmin, PhD

This text is an especially timely new text as the number of studies focusing on the impact of the Mediterranean diet on disease prevention increases every year. The fundamental question addressed in this text is how food components and behavior of the Mediterranean diet reduce the risk of chronic diseases. In-depth chapters provide an overview of preclinical and clinical studies on Mediterranean dietary patterns, food components and lifestyle and their impact on health and disease. Large-scale "omic" approaches are highlighted to educate the reader about the molecular mechanisms through which specific components of the Mediterranean diet improves health and the opportunities and challenges for translating into practice the food recommendations of the Mediterranean pyramid. The volume concludes with information about the nutritional adequacy of Mediterranean foods and provides selected recipes. *Mediterranean Diet: Impact on Health and Disease* will be of great interest to students, clinicians, and scientists engaged in promoting health through nutrition and physical activity.

**Order the Book**

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**UA Engineers Zero in on Early Detection of Ovarian Cancer**

University of Arizona researcher Jennifer Barton is leading a two-year, $1 million project funded by the National Cancer Institute to identify imaging biomarkers of ovarian cancer, the most deadly gynecological cancer in the United States. This work may enable the first effective screening system for ovarian cancer.
"Located deep in the body, with few early symptoms and no effective screening techniques, ovarian cancer has remained stubbornly difficult to understand, much less effectively combat," said Barton, professor of biomedical engineering, electrical and computer engineering, optical sciences, and agricultural and biosystems engineering, and interim director of the UA BIO5 Institute.

In fact, 70 percent of women diagnosed have advanced ovarian cancer that has spread beyond the fallopian tubes and ovaries to other organs, she said.

Read the Full Story
"We're very excited to know that the NuPET™ system will be empowering scientists to more accurately interrogate a tumor's characteristics for the benefit of cancer research," says George Abe, CEO of Cubresa. "Cancer is multifaceted. The Cubresa NuPET™ system provides researchers at the University of Arizona with the ability to monitor structural, functional and molecular changes at the same time under identical physiological conditions in order to help better understand the underlying disease and develop targeted therapies."

Faculty at the University of Arizona are primed with two research areas to begin work when the PET insert arrives. First, they have developed an MRI method that measures tumor acidosis. Tumors have high metabolism and generate a lot of lactic acid, a process known as aerobic glycolysis. PET is often used to track the start of aerobic glycolysis by detecting a radioactive form of glucose (fluoro-deoxyglucose, or FDG) that is rapidly transported into cancer cells. Pagel and colleagues plan to combine the existing MRI method with the FDG PET method to track both the start and end of aerobic glycolysis in tumors. This will improve the assessment of tumor biology, especially changes in tumor biology in response to therapies.

Second, researchers at the UA have developed a PET/MRI contrast agent that is detected with both PET and MRI. This hybrid chemical contrast agent will allow them to measure tumor acidosis very accurately. There are advantages to a "one agent injection" method vs. the injection of a cocktail of 2 agents for PET and MRI that are described above in the first project.

The University of Arizona has strong interests in translating their new methods to the clinic to improve the detection of tumors, and to assess early responses in tumors that are caused by chemotherapies. The UA also plans to obtain a clinical PET/MRI scanner in 2018, so researchers will be ideally suited for this clinical translation in about 18 months.

Cubresa will showcase the NuPET™ scanner in Booth 1148 at the SNMMI (Society of Nuclear Medicine and Molecular Imaging) 2016 Annual Meeting in San Diego, June 11-14, 2016.
We Have Renewed Our Subscription to The Cancer Letter

Sign Up for the Mailing List

The Cancer Letter is a national publication for and about NCI-designated Cancer Centers where science, the funding climate, and other interesting topics are discussed.

Go To The Cancer Letter or Click Here for Help Logging In or Sign Up for the Mailing List

Current Funding Opportunities

Pilot Funding - American Cancer Society Institutional Research Grant

CANCER RESEARCH FUNDS AVAILABLE FOR NEW INVESTIGATORS
Qualified faculty from the University of Arizona and its affiliates are encouraged to apply for cancer research funds made available through an American Cancer Society Institutional Research Grant (ACS-IRG). These funds are intended to provide seed money to new investigators to help them with starting their research programs and to obtain preliminary data in support of more extensive proposals. Only applications that relate to cancer research will be accepted. However, cancer-related research will be interpreted using the broadest definition.

DEADLINE FOR LOI: Monday, Aug. 17, by 5 p.m.
DEADLINE FOR PROPOSAL: Monday, Oct. 5, by 5 p.m.
Three $50,000 cash awards for young immigrant biomedical scientists

The Vilcek Foundation is seeking applications for the 2017 Vilcek Prizes for Creative Promise in Biomedical Science. Three foreign-born biomedical scientists will be selected to receive the prizes, each comprising an unrestricted cash award of $50,000.

The Vilcek Prizes for Creative Promise honor young scientists who have distinguished
themselves early in their careers, and help to raise awareness of the key role immigrant researchers play in sustaining the leadership position of the United States in the sciences.

Applicants must fulfill the following requirements:

- Have been born abroad
- Be naturalized citizens or permanent residents of the United States; also eligible are persons who have held a valid H-1B or O-1 visa for at least five years, and individuals who have been granted Deferred Action for Childhood Arrivals (DACA) relief
- Have a doctoral degree and intend to pursue a career in the United States
- Be no more than 38 years old as of December 31, 2016
- Hold a full-time independent position at an academic institution or other research organization

A complete application form, a professional résumé, a list of publications, and letters of recommendation are required. A panel of distinguished members of the scientific community will select the prizewinners. The jury will consider the candidates’ innovation, independence, creativity, clarity of vision, and impact on the field of biomedical research. More information and a link to the online application can be found at Vilcek.org.

**Application deadline: June 10, 2016**

Please contact: Rachele Peterson, Assistant Director, Research Administration, petersr2@email.arizona.edu, for application and pre-award support.

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**The Role of Mobile Genetic Elements in Cancer (R01)**

The overall goal of this funding opportunity announcement (FOA) is to encourage applications to investigate mechanisms regulating the expression and activity of mobile genetic elements, including long terminal repeat (LTR) and non-LTR retroelements, in cancer. For example, although long interspersed element-1 (LINE-1 or L1) retroelements are active in many cancers whether somatic L1 insertions lead to cancer cell heterogeneity and/or adaptive phenotypes that confer growth or survival advantages during cancer evolution or response to therapy is not clear. Similarly, how human endogenous viruses (HERVs) affect cancer processes is also not well understood. In an effort to address this knowledge gap, this FOA invites research applications that specifically investigate mechanisms regulating the expression and activity of mobile genetic elements in the context of cell transformation and assess the
impact of their activity on tumor heterogeneity, cancer evolution, and response to therapy.

**LOI due September 5, 2016**  
**Application: Standard dates apply**  
**View Full Details**

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**Department of Defense**  
**Peer Reviewed Cancer Research Program**

**Pre-application submission deadline:**  
**June 8, 2016**  
**Application (by invitation only)**  
**deadline:**  
**September 13, 2016**

To be considered for funding, applications for the PRCRP Awards, your proposal must address at least one of the FY16 PRCRP Topic Areas as directed by Congress. Research applications in the areas of breast, prostate, lung (excluding mesothelioma), or ovarian cancer will not be accepted. The FY16 PRCRP Topic Areas are listed below.

- Bladder cancer (New for FY16)
- Colorectal cancer
- Immunotherapy* (New for FY16)
- Kidney cancer
- Listeria vaccine for cancer
- Liver cancer
- Lymphoma
- Melanoma and other skin cancers
- Mesothelioma
- Neuroblastoma
- Pancreatic cancer
- Pediatric brain tumors (New for FY16)
- Stomach cancer

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**Application Instructions**

**Career Development Award**
The Career Development Award supports independent, early-career investigators to conduct impactful research with the mentorship of an experienced cancer researcher (i.e., the Designated Mentor) as an opportunity to obtain the funding, guidance, and experience necessary for productive, independent careers at the
forefront of cancer research. This award supports impactful research projects with an emphasis on discovery. Under this award mechanism, the early-career investigator is considered the Principal Investigator (PI), and the application should focus on the PI's research and career development. It should be clear that the proposed research is intellectually designed by the PI and not a product of the Designated Mentor. Preliminary data are not required. However, logical reasoning and a sound scientific rationale for the proposed research must be demonstrated. Maximum funding period of three years. Direct costs for the project period will not exceed $360,000.

**View Full RFA**

**Idea Award with Special Focus**

The Idea Award with Special Focus supports innovative, untested, high-risk/potentially high-reward concepts, theories, paradigms, and/or methods in cancer research that are relevant to Service members, their families, Veterans, and other military beneficiaries. The "Special Focus" of this award mechanism is on exposures, conditions, or circumstances that are unique to the military, disproportionately represented in a military beneficiary population, or may affect mission readiness. Cancers or circumstances with cancer risk that may affect military families are of special importance to the care and well-being of the military for total mission readiness. The advancement of knowledge in cancer research, patient care, and/or treatment options in the military health system is critical to active duty Service members, their families, Veterans, other military beneficiaries, and the American public. Maximum funding period is two years. Direct cost for the project period will not exceed $400,000.

**View Full RFA**

**Translational Team Award**

The Translational Team Science Award supports hypothesis-driven translational studies associated with an ongoing or completed clinical trial that could lead to a next-phase clinical trial or future clinical application. By leveraging information from ongoing or completed clinical trials, research projects funded by the TTSA should address critical knowledge gaps in outcomes, validate key research and expand upon potential transformative results, or investigate novel findings. Observations from ongoing or completed clinical trials may be utilized to formulate a new hypothesis to move to the next research stage or step of implementation of the clinical outcomes. The TTSA is not intended to fund the ongoing clinical trial. Applications associated with a clinical trial not yet started are discouraged. The TTSA may support preclinical studies in animal models and human subjects and human anatomical substances. Accordingly, development or use of relevant preclinical models may be included. The TTSA is not intended to support high-throughput screenings, sequencing, etc. Maximum funding period is three years. Direct costs for project period will not exceed $1,000,000.

**View Full RFA**
Please contact: Rachele Peterson, Assistant Director, Research Administration, petersr2@email.arizona.edu, for application and pre-award support.

**LCFA/IASLC LORI MONROE SCHOLARSHIP IN TRANSLATIONAL LUNG CANCER RESEARCH**

The objective of this Award is to support research that improves the care of individuals with lung cancers and to reduce the burden of these diseases. Examples include studies designed to define the molecular basis of lung cancer risk assessment, improved molecular diagnostic studies designed to detect the disease early and guide curative-intent therapy, or predictive features guiding the use of targeted or immune oncology therapy to reduce recurrence after standard curative-intent strategies in early stage disease, or to improve the outcomes or cure patients with metastatic lung cancer. Likewise, studies designed to facilitate care by minimizing treatment side effects or illuminating the causes of nonsmoking related lung cancer are encouraged.

Please see attached RFA for application instructions.

UAHS Research Administration will provide application and pre-award support. Please contact: Rachele Peterson, petersr2@email.arizona.edu or Sean Armstrong, armsto@email.arizona.edu.

**Damon Runyon Innovation Award**

The Damon Runyon-Rachleff Innovation Award is designed to provide support for the next generation of exceptionally creative thinkers with "high-risk/high-reward" ideas that have the potential to significantly impact our understanding of and/or approaches to the prevention, diagnosis or treatment of cancer.

The Innovation Award is specifically designed to provide funding to extraordinary early career researchers who have an innovative new idea but lack sufficient preliminary data to obtain traditional funding. It is not designed to fund incremental advances. The research supported by the award must be novel,
exceptionally creative and, if successful, have the strong potential for high impact in the cancer field.

Awards are made to institutions for support of the Damon Runyon-Rachleff Innovation Investigators. All awards are approved by the Board of Directors of the Damon Runyon Cancer Research Foundation acting upon the recommendation of the Innovation Award Committee.

**Application Deadline July 1**

The Stage 1 award will be for **two years, $150,000 per year ($300,000 total)** with the opportunity for up to two additional years of funding (**up to four years total for $600,000**). Stage 2 support for years three and four will be granted to those awardees who demonstrate progress on their proposed research during years one and two of the award. Applicants will provide a written update on their research and present their progress in person to the committee shortly before the end of the second year of the award, at which time the committee will make a decision regarding continued funding.

**Click Here for Further Details**

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**The University of Arizona Health Sciences**

**UAHS Career Development Award**

The University of Arizona Health Sciences (UAHS) Career Development Award (CDA) training program is designed to provide research training and funding opportunities for junior faculty members at the UA to foster academic careers in clinical and translational research. Personalized didactic coursework, mentored research and multidisciplinary interactions and collaborations will be offered to develop the skills and knowledge necessary to build a well-funded collaborative research career for the awardees.

**Application Deadline: June 15, 2016**

The UAHS-CDA scholars will receive **salary support of $75,000 per year for two years** or funds to cover ~75 percent assigned effort of the current total base salary, plus fringe benefits. In addition, **as much as $5,000 per year** will be available to defray costs associated with the scholar's research-related activities, including lab supplies, tuition and fees for enrolling in courses of interest related to his/her research. In addition, the UAHS-CDA will provide **$1,500 per year for the scholar to travel** to one or more academic conferences, and **$5,000 per year to contribute toward the mentor's research program**. The scholars will be selected by a UAHS-CDA Advisory Committee composed of established investigators and physician-scientists with excellent track records and well-funded research programs.
UAHS Bridge Funding Program

The Office of the Senior Vice President for Health Sciences (SVPHS) and Deans of the UAHS Colleges (Medicine in Tucson and Phoenix, Pharmacy, Nursing and Public Health) have developed a program to provide bridge funding to support faculty at UAHS to span the gap in innovative and significant research projects. The UAHS Bridge Funding Program, which is established and administered by the SVPHS office, is intended to bridge funds to minimize disruption of existing research projects that have temporarily lost external funding but show high promise of success in the next round of competitive review.

Application Deadline July 1, 2016 or December 1, 2016

The maximal award for Bridge Funding is not to exceed $6,000/month for 12 months ($72,000/year). The funds will be provided to the awardee by the Office of the SVPHS, the Office of the Dean, and the Office of the Chair (of the awardee's home college and department). The support will be provided monthly, for a maximum of one year, and end at the start of any renewed or new funding. The SVPHS/Dean offices anticipate supporting up to five (5) investigators for Bridge Funding each year in 2016 and 2017.

Notice of Intent to Publish a Funding Opportunity Announcement for NCI Youth Enjoy Science (YES) Program (R25)

The National Cancer Institute (NCI) intends to publish a Funding Opportunity Announcement (FOA) for the NCI Youth Enjoy Science (YES) Program as part of the Continuing Umbrella of Research Experiences (CURE) Program.

The goal of this R25 program is to support educational activities that complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs.
The primary focus of this initiative is on providing research experiences. Based on the success of the previous NCI Cancer Center Supplements for High School and Undergraduate Student Research Experiences (P30S), this FOA will support efforts to create and maintain an institutional program to engage grade 6-12 and undergraduate students from underrepresented populations in cutting edge cancer research. The proposed institutional programs may also provide research experiences for K-12 teachers and undergraduate faculty members who serve underrepresented student populations.

The overall goals are to inspire interest in biomedical sciences, help envision research as a career path, and strengthen practical research and career skills. In alignment with these goals, institutions may develop unique programs that capitalize on their research strengths and are responsive to their target populations.

This Notice is being provided to allow potential applicants sufficient time to develop meaningful collaborations, identify program faculty, and create responsive research education programs.

Notice Number: NOT-CA-16-028   Click Here for Full Details

New to the UACC Family

Please Welcome Our New Team Members!

Kerry-Ann Suckra Phillips - Research Specialist
Zachary Herbert - Research Technician
Kara Heard - Research Specialist
Patricia Conrad - Senior Research Specialist
Alyssa Mazza - Research Technician
Ning Qu - Senior Research Specialist

Call for Collaborations
This section is intended to provide a platform for UACC Members to propose collaborative efforts with each other. Any and all ideas are welcome. Contact Cody Cassidy with your proposal to be posted here.

Share Your Stories and Ideas

This newsletter is still in its infancy, and it will continue to evolve based on your feedback.

Please send news items, announcements, calls for collaborations, upcoming events, comments, and anything else that you can think of to Cody Cassidy, ccassidy@uacc.arizona.edu.
The University of Arizona Cancer Center, PO Box 245024, Tucson, AZ 85724-5013

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