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Susan G. Komen for the Cure® awards \$1.2 million for innovative breast cancer research at the Karmanos Cancer Institute and Wayne State University

DETROIT – Four researchers from Detroit, Michigan’s Barbara Ann Karmanos Cancer Institute and Wayne State University (WSU) will receive a total of \$1.2 million from Susan G. Komen for the Cure® to help advance research to better detect, prevent and eliminate breast cancer. The \$1.2 million awarded to these outstanding scientists is part of the \$59 million portfolio of research grants that Susan G. Komen for the Cure® has awarded this year alone to scientists across the globe to help accelerate innovative breast cancer research.

This year’s Komen awardees are Angelika Burger, Ph.D., director of the Translational Research Laboratory at the Karmanos Cancer Institute, and professor of Pharmacology at WSU’s School of Medicine; Neb Duric, Ph.D., director of the Imaging Program at the Barbara Ann Karmanos Cancer Institute, and professor of Radiation Oncology, WSU’s School of Medicine; Karin List, Ph.D., assistant professor, WSU’s Department of Pharmacology and Barbara Ann Karmanos Cancer Institute ; and Peter J. Littrup, M.D., vice chair of Radiology and director of Interventional Radiology, Barbara Ann Karmanos Cancer Institute, and professor of Radiology, Urology and Radiation Oncology, WSU’s School of Medicine.

“Our research investments in Michigan reflect our tremendous urgency to discover and deliver more effective treatments, and to find better and more accurate ways to screen for breast cancer in the first place,” said Ambassador Nancy G. Brinker, founder and CEO of Susan G. Komen for the Cure®.

“Komen’s infusion of millions of dollars into research projects means that promising research designed to treat and ultimately eradicate breast cancer will continue,” said Eric Winer, M.D., Komen’s chief scientific advisor.

Since 1992, Komen for the Cure® has awarded \$450 million in research grants worldwide, of which \$13.7 million has been awarded to Michigan scientists. Approximately 25 percent of the funds raised by Komen Affiliates, such as the Susan G. Komen Detroit Race for the Cure®, help support the national Susan G. Komen for the Cure Award and Research Grant Program, benefiting scientists from around the world. Much of the funds raised in Michigan come back to benefit Michigan scientists. In addition, the remaining 75 percent of funds raised by Komen Affiliates stay in those communities to help support local breast health programs.

Maureen Keenan Meldrum, Komen Detroit Race for the Cure® chair and director of Breast Cancer Special Programs at the Barbara Ann Karmanos Cancer Institute, has seen first-hand the outpouring of community support for Komen’s work.

“We’re thrilled that funds raised here in Detroit support not only local outreach programs but also scientists worldwide – especially our brilliant scientists right here at home, “ said Keenan Meldrum. “Their commitment to cancer research makes an immense impact, not only in our community but also around the world, so that one day we can end breast cancer forever.”

Research Being Funded

Angelika Burger, Ph.D.: Evaluation of Aldehyde Dehydrogenase Inhibitors for the Prevention and Treatment of Triple Negative Breast Cancer

Dr. Burger's research to improve treatment strategies for triple negative breast cancer patients will receive \$180,000. Most breast cancers are characterized by the presence of three receptors (proteins found inside or on the surface of breast cells): estrogen, progesterone and HER2. These receptors are not "expressed" in women with triple negative breast cancer (TNBC). As most current treatments are aimed at those receptors, TNBC is difficult to treat, and the tumors are often more aggressive. TNBC only represents approximately 15 percent of all breast cancer cases, but accounts for as many as 25 percent of all breast cancer deaths. TNBC often affects young women in childbearing years, particularly young African American women, and has a high recurrence. Current treatments are not always effective, resulting in a low five-year survival rate. Some TNBC patients can have an increased activity in the enzyme aldehyde dehydrogenase 1 (ALDH1) that can be resistant to cytotoxic chemotherapy, currently the only treatment option for TNBC. The development of novel drugs and better treatment strategies for TNBC is critical to increase survival rates.

Neb Duric, Ph.D. and Peter Littrup, M.D.: Development of a Predictive Model for Improved, Cost-effective Breast Cancer Detection Based on Biomechanical Properties of Tissue

Dr. Duric's and Dr. Littrup's research to support the development of an ultrasound tomography (UST) breast cancer screening tool will receive nearly \$600,000. Dr. Duric and Dr. Littrup are co-creators of a breast cancer screening device called SoftVue, which uses ultrasound tomography to image acoustic properties of breast tissue. The images produced are high quality, detailed images similar to that of an MRI (magnetic resonance imaging.) Unlike mammography, this process does not involve radiation or compression, takes about one-minute per exam and is very effective in imaging women with dense breasts who have an unusually high risk of developing breast cancer. It is the hope that additional clinical study will validate strong preliminary findings and demonstrate that:

- this technology can detect breast cancer at an earlier stage when it is most curable and is very effective in detecting cancer in women with dense breasts
- the imaging capability of this technology has the potential to accurately differentiate cancer from normal tissue and benign disease, which could decrease unnecessary biopsies
- women may be more likely to participate in a breast cancer screening process that is comfortable, involving no compression or radiation, which could result in more cancers being caught at an earlier stage to improve breast cancer survival rates.

Karin List, Ph.D.: Matriptase-Mediated Signaling in Breast Cancer as a Target for Therapeutic Intervention

Dr. List will receive \$450,000 to lead the first ever study that investigates the role of matriptase, a recently discovered enzyme of the protease class located on the surface of the cells that form the ducts of the mammary gland, in breast cancer progression. Elevated levels of proteases help tumors invade tissue and spread to distant sites, and matriptase is found in higher levels in most women with breast cancer which can predict a more aggressive tumor that is more difficult to treat. List and her collaborators will study the consequences of eliminating or inhibiting matriptase for breast cancer within the mammary glands of mice and in cell culture through a new genetic system developed by the group that isolates normal and cancerous mammary cells and induces a deletion of the gene which encodes matriptase. This will allow the researchers to compare the ability of cancer cells that have matriptase with cells that lack matriptase to grow and spread tumors.

"This study will provide important knowledge on the role of matriptase in breast cancer and whether it is a valid target candidate for new therapeutic drug development and other alternative approaches to eliminate or impair the growth of tumors," said Gloria Heppner, associate vice president for Research at WSU. "This important study is another example of the critical breast cancer research being done at the Karmanos Cancer Institute and Wayne State University, putting us one step closer to a cure for the most common cancer among women in the United States."

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“The Karmanos Cancer Institute is honored to work with the dedicated and persistent team of cancer researchers at Karmanos and WSU,” said Wei-Zen Wei, Ph.D., associate center director, Basic Research, Karmanos Cancer Institute and professor, Wayne State University School of Medicine. “We are grateful to have our scientists recognized by Susan G. Komen for the Cure®, an organization whose education and advocacy work is highly respected. Together we are saving lives.”

Other Komen Investments – National and Local:

- Komen also has funded more than **\$450 million in research globally**, starting with Komen’s first grant in 1982 for \$28,000. In the past four years alone, Komen has provided \$300 million to research programs.
- Additionally, Komen’s four Michigan Affiliates invested **\$2.1 million in their local communities last year** for early detection and treatment of breast cancer, breast health education and outreach. Of that, the **Komen Detroit Race for the Cure®, locally presented by the Karmanos Cancer Institute, invested \$1.5 million** for programs in Wayne, Oakland and Macomb counties, allowing the uninsured and underinsured to receive lifesaving services. Figures for the 2010 Race will be announced in early fall.
- Nationwide, Komen Affiliates last year invested a total of **\$130 million in their local communities**. During the past 28 years, Komen has invested more than **\$900 million to community education and support programs worldwide**.

About Susan G. Komen for the Cure®

Nancy G. Brinker promised her dying sister, Susan G. Komen, she would do everything in her power to end breast cancer forever. In 1982, that promise became Susan G. Komen for the Cure and launched the global breast cancer movement. Today, Komen for the Cure is the world’s largest grassroots network of breast cancer survivors and activists fighting to save lives, empower people, ensure quality care for all and energize science to find the cures. Thanks to events like the Komen Race for the Cure®, Komen has invested more than \$1.5 billion to fulfill its promise, becoming the largest source of nonprofit funds dedicated to the fight against breast cancer in the world. For more information about Susan G. Komen for the Cure, breast health or breast cancer, visit www.komen.org or call 1-877 GO KOMEN.

About the Barbara Ann Karmanos Cancer Institute

Located in mid-town Detroit, Michigan, the Barbara Ann Karmanos Cancer Institute is one of 40 National Cancer Institute-designated comprehensive cancer centers in the United States. Caring for nearly 6,000 new patients annually on a budget of \$216 million, conducting more than 700 cancer-specific scientific investigation programs and clinical trials, Karmanos is among the nation’s best cancer centers. Through the commitment of 1,000 staff, including nearly 300 physicians and researchers on faculty at the Wayne State University School of Medicine, and supported by thousands of volunteer and financial donors, Karmanos strives to prevent, detect and eradicate all forms of cancer. Its long-term partnership with the WSU School of Medicine enhances the collaboration of critical research and academics related to cancer care. Karmanos is southeastern Michigan’s most preferred hospital for cancer care according to annual surveys conducted by the National Research Corporation. Gerold Bepler, M.D., Ph.D., is the Institute’s president and chief executive officer. For more information call 1-800-KARMANOS or go to www.karmanos.org

About Wayne State University

Wayne State University is one of the nation’s pre-eminent public research universities in an urban setting. Through its multidisciplinary approach to research and education, and its ongoing collaboration with government, industry and other institutions, the university seeks to enhance economic growth and improve the quality of life in the city of Detroit, state of Michigan and throughout the world. For more information on research at Wayne State University, visit <http://www.research.wayne.edu>.

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