



December 2011

## **Dr. Schneider's research: Top clinical cancer advances of 2011**

Breast cancer research conducted by an Indiana University Melvin and Bren Simon Cancer Center physician/researcher has been named one of the top clinical cancer research advances of the year by the American Society of Clinical Oncology (ASCO).

[Bryan Schneider](#), MD, and colleagues identified a genetic biomarker that causes neuropathy among some breast cancer patients using a class of chemotherapy drugs called taxanes. That research is featured in [2011 Clinical Cancer Advances: ASCO's Annual Report on Progress Against Cancer](#). The report is an annual, independent review of advances in cancer research that have had the greatest impact on patient care.

Dr. Schneider's study is one of the first genetic biomarkers to have been reported for neuropathy caused by taxanes, which includes paclitaxel or Taxol.

The finding may eventually lead to a blood test to determine if a patient is at risk of developing neuropathy. Dr. Schneider and colleagues found the gene by conducting a comprehensive genetic look at more than one million genetic variations in each of the 2,204 breast cancer patients studied. The patients were enrolled in the Eastern Cooperative Oncology Group clinical trial E5103.

The Indiana University investigators looked for variations in DNA called single nucleotide polymorphisms or SNPs. They identified genetic subgroups that were likely to develop neuropathy. Those who carried two normal nucleotides in the RWDD3 gene had a 27 percent chance of experiencing neuropathy. But those who carried one normal nucleotide and one SNP had a 40 percent chance and those who carried two SNPs had a 60 percent chance.

The study also found that older patients and African Americans were much more likely to have neuropathy.

Dr. Schneider and colleagues will advance their research with additional trials to validate these findings and to determine whether a different type of taxane therapy would result in less neuropathy in the more susceptible genetic group.

The three-year grant, supported by The Breast Cancer Research Foundation, provides \$450,000 to further Dr. Schneider's research. He is a past recipient of the Conquer Cancer Foundation's 2006 Career Development Award and 2002 and 2003 Merit Awards.





Earlier this fall, the Conquer Cancer Foundation of the American Society of Clinical Oncology (formerly The ASCO Cancer Foundation) named Dr. Schneider the recipient of the 2011 Advanced Clinical Research Award (ACRA) in Breast Cancer. Recipients are selected based on their unique patient-oriented approaches to research. Additional selection criteria include the significance and originality of the project, appropriateness and feasibility of the proposed research methods, potential impact of the research, and prior research experience, and accomplishments of the applicants.



December 2011

## ACS awards Scholar Grant to Dr. Meroueh

The American Cancer Society has awarded a Research Scholar Grant to an IU Simon Cancer Center research studying a protein that promotes cancer metastasis.

[Samy Meroueh](#), PhD, will receive \$720,000 over a four-year period. The prestigious grant funding is reserved for junior faculty members with promising cancer research.

Dr. Meroueh's research focuses on uPAR, a cell surface receptor that has been the focus of his research for several years. The receptor exists only in cancer cells that metastasize, making it an excellent target for the development of therapeutics to block metastasis, which is the main reason that more than 90 percent of patients succumb to cancer, he said.

With earlier funding from the National Institutes of Health, Dr. Meroueh's lab has identified small molecules that attach to uPAR on the surface of cancer cells in metastatic tumors.

"This proposal focuses on two lead compounds, and we will employ computational design and chemical synthesis to improve their efficacy," he said. "Currently, we are studying the effects of our molecules on breast cancer metastasis in mice. One compound is already showing promise in blocking metastasis to the lungs."

He hopes to link these molecules with existing chemotherapeutic agents that will attach to the uPAR protein and selectively kill cancer cells, while sparing healthy cells.

A second phase of the study will link the uPAR-targeted molecules with probes for high-resolution imaging of metastases that are not detected by conventional PET scans. That would provide physicians tools to better assess the degree of metastasis early and adjust treatment to prevent recurrence.



Meroueh

--Mary Hardin



December 2011

## News briefs

### Volunteers needed for Indy's Super Cure Jan. 28 & 29

Volunteers are needed during Indy's Super Cure to help ensure everything runs smoothly for the 700 women who are expected to donate breast tissue.

Indy's Super Cure, a partnership between the Susan G. Komen for the Cure® Tissue Bank at the IU Simon Cancer Center ("Komen Tissue Bank") and the 2012 Indianapolis Super Bowl Host Committee, is Jan. 28 and 29, the weekend before the Super Bowl, at the IU Simon Cancer Center, 1030 W. Michigan St.

The volunteer shifts are 7:30 a.m. to 1:30 p.m. and 1 p.m. to 6 p.m. both days. You can sign up and view a listing of volunteer job descriptions at [www.komentissuebank.iu.edu](http://www.komentissuebank.iu.edu). Go to the "volunteers" tab.



Training will be required for all volunteers who have not previously volunteered for the Komen Tissue Bank. The volunteer orientation sessions will be offered throughout January at various times and locations. Volunteers will receive an Indy's Super Cure volunteer T-shirt, and during their shift, they will receive a meal, refreshments, and free parking.

Questions? Contact Liz Way at [komentb@iupui.edu](mailto:komentb@iupui.edu) or 274-2366.

The Komen Tissue Bank is the world's first and only healthy breast tissue bank. By collecting samples from women without breast cancer, researchers may be able to determine the differences between healthy and cancerous tissues, which could lead to a better understanding of the disease.

### Do you know of students interested in a cancer research career?

Do you know of high school or college students who have an interest in cancer research? If so, tell them about the IU Simon Cancer Center's 2012 Summer Research Program. The cancer center's annual Summer Research Program, held in partnership with the IUPUI Center for Research and Learning, places students with a mentor physician or researcher for nine weeks (May 31 to July 27). Additional information and an online application is available at [www.cancer.iu.edu/srp](http://www.cancer.iu.edu/srp). Applications are due Feb. 17, 2012.

### Indiana CTSI grants

The Indiana CTSI has new open requests for applications:

- The T Trainee and K Scholar Awards provide financial and research support to pre-doctoral and post-doctoral researchers engaged in translational research, respectively. (<http://www.indianactsi.org/news/2012kandtawards/>)
- The Indiana CTSI Community Health Engagement Program (CHEP) grant program supports community-based research projects. (<http://www.indianactsi.org/news/2012cheprfa/>)

## Grants available to researchers

For the latest grant opportunities, visit the [Funding Opportunities](#) page on the IUSCC Web site.

## Cancer center members in the news

- **Karen Cowden Dahl, PhD**, has been awarded a \$450,000 grant from the Ovarian Cancer Research Fund (OCRF) to pursue her investigation of the role of the gene ARID3B in ovarian cancer. ARID3B generates two proteins, one which has heightened presence in ovarian cancer cells. The project will determine if this protein, referred to as the short form, in fact causes or promotes cancer. If so, the research team will explore whether that protein can be a target for ovarian cancer therapies. Cowden Dahl is a fellow at the Harper Cancer Research Institute, a partnership between IUSM-SB and the University of Notre Dame, and a member of the cancer center's developing Tumor Microenvironment and Metastasis research program. Her research in the molecular basis of ovarian cancer tumors focuses on metastasis and acquired resistance to the chemotherapeutic drugs.
- **Sunil Badve, MBBS, MD; Patrick Loehrer, MD; Kenneth Kesler, MD**; and colleagues reported: "... that all types of thymic tumors, regardless of histologic type, can be associated with invasion and metastases to thoracic and extrathoracic sites" in the Nov. 11 issue of [Modern Pathology](#).
- **Paul Helft, MD**, and colleagues wrote "Contemporary Ethical Issues in Human Milk-Banking in the United States" for [Pediatrics](#). It appeared online on Nov. 14.
- **Scott Boswell, MD, Larry Cripe, MD, Angelo Cardoso, MD, PhD; Lang Li, PhD, Attaya Suvannasankha, MD, Hamid Sayer, MD, MS**, and colleagues wrote "A Non-canonical Flt3ITD/NF-κB Signaling Pathway Represses DAPK1 in Acute Myeloid Leukemia (AML), which was published in [Cancer Clinical Research](#).
- **Peter Johnstone, MD, MA**, was on the panel Acupuncture: Gaps in Knowledge, Proposed Research Strategies, and Patient Relevance on Nov. 11 at the Society for Integrative Acupuncture meeting in Cleveland.

## New members

[Leslie Ann Fecher, MD](#)

*Department of Medicine*

Full member, Experimental and Developmental Therapeutics

[Linda Han, MD](#)

*Department of Surgery*

Associate member, Breast cancer

[Bruce Robb, MD](#)

*Department of Surgery*

Affiliate member

[Mingjiang Xu, MD, PhD](#)

*Department of Pediatrics*

Full member, Hematopoiesis, Microenvironment, and Immunology