

PHILADELPHIA INTERNATIONAL MEDICINE® NEWS BUREAU

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For immediate release:

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Editors note: Research, new techniques and improved facilities by Philadelphia International Medicine hospitals and physicians may lead to new ways to treat some of our most challenging diseases. Below are just some examples from our hospitals.

**Sun Yong Lee, MD, Appointed Assistant Director at
Jefferson Breast Care Center**

PHILADELPHIA – Sun Yong (Sunny) Lee, MD, has been appointed assistant director at the Jefferson Breast Care Center, and assistant professor in the Department of Surgery at Jefferson Medical College of Thomas Jefferson University.

Dr. Lee received her Bachelor of Arts degree from Harvard University and graduated Magna Cum Laude. She then attended Cornell University Medical College where she received her medical degree in 1990. After graduating medical school, she interned at Pennsylvania Hospital (1990-1991) and completed her surgical residency in 1996. She was a Research Fellow in the Harrison Department of Surgical Research at the University of Pennsylvania School of Medicine and focused her research on tumor immunology.

Dr. Lee further trained at the University of Pennsylvania as a Trauma and Surgical Critical Care Fellow from 1996 to 1998 and stayed on as an attending surgeon and faculty member. She then made a career change and redirected her focus to breast cancer patients. She trained as a Fellow in Breast Surgery at Thomas Jefferson University Hospital. Subsequently Dr. Lee practiced as a breast care specialist at Hartford Hospital and was a faculty member at University of Connecticut School of Medicine prior to her return to Jefferson. While in Hartford, Dr. Lee was recognized as one of the area's Top Doctors. Dr. Lee is certified by the American Board of Surgery and is a Fellow of the American College of Surgeons. She holds memberships in the American Society of Breast Surgeons, American Society of Breast Diseases, and the Association of Women Surgeons.

**Fox Chase Study: Engineered Antibodies Directed Against a Promising Therapeutic Target on
Ovarian Cancer Cells**

Stealthy and stubborn, ovarian cancer is a particularly vexing malignancy, difficult to diagnose in early stages and difficult to treat once it progresses further. However, research at Fox Chase Cancer

Center is now focusing on one of the most promising new approaches to dealing with the disease—using engineered antibodies to target tumor cells while leaving healthy cells intact.

Gregory Adams, PhD, co-leader of the Developmental Therapeutics Program at Fox Chase Cancer Center, and colleagues recently isolated a small, antibody-like molecule called GS45, which is capable of zeroing in on a sort of red flag that distinguishes ovarian cancer cells from normal cells. Tatiana Karakasheva, MS, a graduate student in Adams laboratory, plans to present the findings at the 2010 annual meeting of the American Association for Cancer Research.

The GS45 molecule targets a receptor called the Müllerian Inhibiting Substance Type II Receptor (MISIIR), which is scarce in normal tissue but more abundantly present on the surface of human ovarian cancer cells.

“A general problem with targeted therapies is that many of the targets found on cancer cells are also found on normal cells,” says Karakasheva. “When you direct cell-killing drugs at those targets, you get side effects. The great thing about our target is that in healthy tissue, it’s primarily restricted to the reproductive system, and its expression dramatically increases in ovarian cancer.”

“But attractive as MISIIR is as a target, finding antibodies that will hone in and bind to it has been a challenge,” Dr. Adams says.

Using a method called combinatorial single-chain Fv phage display, in which human antibody fragments are expressed and selected on the surface of viruses that infect bacteria, Karakasheva and Adams managed to isolate a group of good candidates, including GS45.

Recently they have completed engineering the fragments into full-size human antibodies that will be used in experiments with a mouse model of human ovarian cancer. The first step is to demonstrate that GS45 actually does target ovarian cancer cells and not healthy tissue. Eventually, researchers plan to attach a cell-killing drug to the antibody in order to explore its potential in cancer treatment.

“Because mouse and human MISIIR are almost identical, whatever the mouse experiments reveal about targeting and toxicity is likely to apply to humans,” Dr. Adams says. “This puts us in a powerful position to move this work forward through pre-clinical studies to a point where we’ll know if it’s worth taking to clinical trials.”

In addition to Dr. Adams and Karakasheva, the paper’s authors include scientific associate Heidi Simmons, BS, postdoctoral trainee Stephen Rudnick, PhD, and assistant professor Matthew Robinson, PhD.

Nemours/ duPont Physicians Voted Among Best Doctors in America for 2009-2010

Since the early 1990s, when this one-of-a-kind peer-to-peer survey first began, many of Nemours doctors graced the list; 2009-2010 was no exception. An impressive 84 physicians from Nemours/Alfred I. duPont Hospital for Children in Wilmington, DE made the latest list.

Best Doctors in America® is the result of confidential surveys sent out every two years by Best Doctors®, Inc. – the foremost provider of information about the best medical care available. Of the nationwide experts polled, more than 40,000 are physicians from 46 medical specialties and over 400 subspecialties. It's the nation's very best in medicine voting on others who are at the top of their field with the best training, skills, and experience.

Through polling and balloting software, as well as phone interviews, the doctors are asked to rate the clinical abilities of other physicians who work in their same specialty areas at other facilities – doctors on the most current list in addition to new nominees. Each doctor is asked specific questions about whom they'd recommend or use themselves. In the end, only those physicians who earn the consensus support of their peers are ultimately included on the Best Doctors® list.

Being a “Best Doctor” is a prestigious accolade that only about 5% of physicians practicing in the United States can claim. Essentially it's what makes the acknowledgement all the more meaningful for duPont physicians and the patients and families they serve. Please visit our website: <http://www.philadelphiamedicine.com> or call 1-215-563-4733 for more information about our award winning physicians.

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