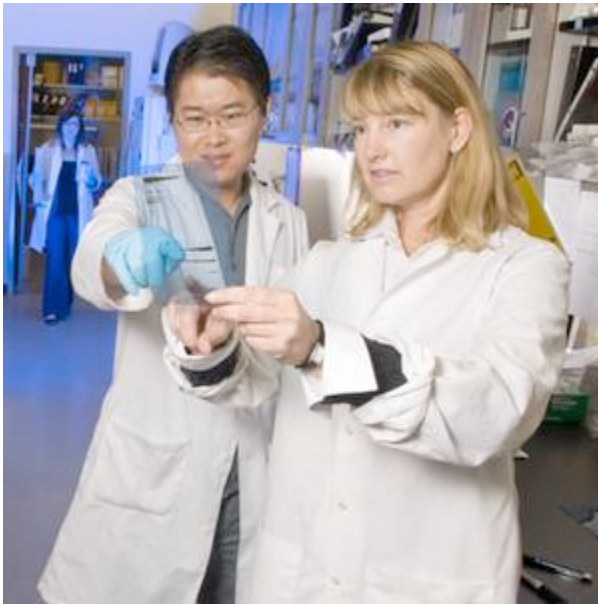


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Biology Researcher Battles Cancer with Boise State's First-Ever Komen Grant



Posted By [Erin Ryan](#) | Jul 19th, 2010 - 1:02 pm | Posted In: [College of Arts & Sciences](#), [Top Story](#) | [Edit](#)



In the fight against cancer, research is the ultimate weapon. Billions are spent every year to support projects that are bringing us closer to fully understanding the disease and finding definitive cures. Some of these projects are being conducted in Boise State's Department of Biological Sciences, including an ongoing breast cancer study led by associate professor Cheryl Jorcyk.

Jorcyk's current work is focused on Oncostatin M (OSM), a protein produced by breast cancer and immune cells that plays a role in inflammation. A \$720,000 American Cancer Society (ACS) grant — only the second ACS grant in Boise State history — is supporting Jorcyk's investigation of the connection between OSM and metastasis. And a newly awarded \$600,000 Komen for the Cure grant — the first Komen grant in Boise State history — will enable exploration of an existing antibody's therapeutic effectiveness against the spread of cancer from breast to bone.

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Jorcyk's latest award is part of a \$59 million portfolio of research grants that Susan G. Komen for the Cure is investing with scientists worldwide. Of that total, more than \$1.3 million has been funneled into Idaho over the last year. Komen Idaho Affiliates in Boise and Coeur d'Alene have invested more than \$783,000 in community programs such as breast health education and outreach related to early detection and treatment, with the remainder of the funding going to Jorcyk's research.

"It's extremely exciting to be entrusted with such important resources and the responsibility to produce results," Jorcyk said. "It is every investigator's hope that the return on investment will be significant, and this project has the potential to deliver."

One of the expectations of the Komen grant is that Jorcyk's research will lead to a new treatment product in the next 10 years, a targeted therapy to better address the complexity of breast cancer. Jorcyk plans to test an existing receptor antibody she says could block the binding mechanism of OSM and translate to such a product.

If she is successful Jorcyk will have made a major contribution when it comes to combating breast cancer, part of cancer's overall statistic as the second leading cause of death in America. The irony is that if it weren't for her parents, she might never have started on the research path.

The summer Jorcyk turned 19 they pushed her to leave her longtime lifeguarding job for an internship at the National Institutes of Health (NIH) near their Rockville, Md, home. Since she was majoring in biology at Pennsylvania State University, they said it made sense to get some related work experience. Grudgingly, Jorcyk agreed.



Cheryl Jorcyk.

She spent the rest of her college summers in the NIH lab. The first project she worked on was an effort to clone the human Myc gene, which can cause cancer when altered. Her second project involved the study of breaking and switching the chromosomes associated with Burkitt's lymphoma to test a theory that the switch catalyzes the Myc gene's cancer-causing behavior.

"I almost burned the lab down that summer," Jorcyk joked. "It was a big year."

Jorcyk's third project was the proverbial "charm." She had just graduated from Penn State and was working as a lab technician. She helped develop a way to detect a virus closely related to HIV, and her name wound up on the published results.

The paper caught the attention of the chair of the biology department at Johns Hopkins University, and he encouraged Jorcyk to apply for their graduate program. The NIH funded her studies through the achievement of her doctorate, and she never looked back.

"Dr. Jorcyk exemplifies the spirit of Boise State's research mission, to surpass expectations and define powerful new possibilities," said Director of Technology Transfer Mary Givens. "The knowledge generated by her research has great promise to impact health and society across the world."

Jorcyk's current research group at Boise State includes post doc research associate Celeste Bolin, graduate students Ken Tawara, Madhuri Nandakumar, Hunter Covert and Jordan Koncinsky, recent graduate and soon-to-be lab manager Dollie LaJoie, INBRE fellows Caleb Sutherland and Rachael Anderson (a student at BYU-Idaho), and technician Ryan Fox. All are raising money for the ACS "Climb to Conquer Cancer," an August event that will have them hiking to the top of Table Rock to raise awareness of the disease and money for research.

"Our work in the lab is crucial to making progress against cancer," said Jorcyk, "but it's important to give back to the organizations that make that work possible."

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