



## Cornell University College of Veterinary Medicine

# Baker Institute for Animal Health

DEDICATED TO THE STUDY OF VETERINARY INFECTIOUS DISEASES, IMMUNOLOGY, GENETICS, AND REPRODUCTION

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## Coalition Supports Baker Cancer Research

The Baker Institute's Professor Scott Coonrod has received a [grant from the Breast Cancer Coalition of Rochester](#) to support his research into breast cancer tumors that have become resistant to a commonly used drug.

"This funding came at a perfect time," said Dr. Coonrod, the Judy Wilpon Professor of Cancer Biology at the Baker Institute. "We're really grateful."

About 75% of women with breast cancer have tumors that are estrogen receptor positive. In these tumors, signals from the hormone estrogen drive the cancer's growth. Many of these women receive a drug called tamoxifen, which keeps the cancer in remission by sticking to the estrogen receptor to block estrogen signaling. Within five years, however, most women experience a relapse in which the cancer cells are resistant to tamoxifen.

The \$50,000 grant will enable Dr. Coonrod's group, along with collaborators in Dr. Charles Danko's lab, to investigate the role that an enzyme called PAD2 plays in tamoxifen resistance. By blocking PAD2 in cultured cells with a drug-like inhibitor, the research group halts estrogen signaling and stops the resistant cells from spreading. Further research must test whether the inhibitor is safe and effective, before any clinical trials can be started. Coonrod's work on PAD2 inhibitors will have an important impact on researchers' understanding of how cells respond to estrogen receptor signaling. In fact, PAD inhibitors are considered to have such large potential in medicine, that [Bristol-Myers Squibb](#), a global biopharmaceutical company, recently acquired the rights to a family of PAD inhibitors.

The ultimate goal of this increased understanding is to increase women's time in remission.

Dr. Coonrod has studied breast cancer since 2007. At his first breast cancer research meeting he was struck by the amazing stories of breast cancer survivors. "Seeing the impact that breast cancer was having on these women made me fully committed to studying this disease," he said. Members of his lab have recently been involved in Cornell's first annual Cancer Research Symposium and have given public talks through the Cancer Resource Center of the Finger Lakes.

Since the majority of mammary tumors in dogs are also estrogen receptor positive, we hope to apply the insights from this research toward our understanding of canine mammary tumors as well.

