

Researchers look at breast cancer drugs to treat certain brain tumors

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Pankja Desai, PhD, (right) and Nimita Dave, PhD, at the Vontz Center for Molecular Studies Imaging Center

University of Cincinnati (UC) researchers hope to repurpose commonly used breast cancer medicines for the treatment of malignant primary brain tumors such as gliomas.

"We have an early discovery with the tremendous potential to cure," says Pankaj Desai, PhD, a professor of pharmacokinetics and [drug](#) metabolism at the UC James L. Winkle College of Pharmacy who is

leading the effort at UC to repurpose aromatase inhibitors, a class of drugs extensively used in the treatment of breast cancer in post-menopausal women.

Ongoing research in brain tumor tissue samples suggests that these agents could be "strikingly effective on [brain tumors](#)," says Desai, a member of the UC Cancer Institute with over 20 years' experience in oncology drug development.

The current efforts are focused on the lead compound letrozole, an orally administered drug with an outstanding record of safe use.

"There is a desperate need for a breakthrough in the treatment of primary brain tumors as they have high rates of morbidity and mortality," says Desai.

The study started as a dissertation research project of Nimita Dave, who completed her PhD at the Winkle College of Pharmacy in April 2014 under Dr. Desai and has continued her work with him as a postdoctoral fellow. Their research project is so promising that the UC Intellectual Property office has filed a patent application and Desai and his team were recently awarded a \$40,000 incubator grant from the University of Cincinnati Technology Commercialization Accelerator in order to develop the administrative protocol to take letrozole to clinical trial.

The team is also working closely with neuro-oncologists Lionel Chow, MD, PhD, Cincinnati Children's Hospital Medical Center, Richard Curry, MD, and John Morris, MD, UC College of Medicine, on designing early clinical trials.

According to Desai, who is the director of the college's master's program in drug development, because the project involves the repurposing an existing drug, with additional funding a clinical trial could start as early

as 2015—and if proven effective the drug could go to market in as few as two to three years.

Provided by University of Cincinnati

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