

# Researchers bring oral cancer-fighting patch to patients

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(Medical Xpress)—The Ohio State University and the University of Michigan have signed an exclusive worldwide agreement with Ohio-based Venture Therapeutics, Inc, to form a new company to develop and commercialize a pharmaceutical technology targeted for the treatment of precancerous oral lesions. These lesions are currently managed by invasive surgery and approximately a third of these lesions will reoccur after surgery.

Previously published data shows that about 30 percent of the higher grade precancerous oral lesions progress to [oral cancer](#), specifically oral squamous cell carcinoma. This type of cancer is particularly devastating to patients because treatment entails removal of facial and mouth structures essential for esthetics and function. The National Cancer Institute estimates that 42,440 Americans will be diagnosed with oral cancer and over 8,390 oral cancer related deaths will occur in 2014.

The pharmaceutical technology developed by researchers at The Ohio State University (OSU) College of Dentistry with secondary appointments at the OSU Comprehensive Cancer Center – Arthur G. James Cancer Hospital and Richard J. Solove Research Institute (OSUCCC – James) and the University of Michigan addresses a significant unmet need related to the prevention of oral cancer.

Precancerous oral lesions can be seen and touched by patients, so this easy access to the lesion allows the use of local delivery formulations in an oral patch to directly treat the disease without causing adverse side effects.

"This type of collaboration, involving multiple university partners with strong industry support, is increasingly essential to expedite the discovery, development and delivery of more targeted cancer therapies. There is no routine cancer, and today it takes the collective minds across disciplines, institutions and industry to move the field forward," says Michael Caligiuri, MD, director of The Ohio State University Comprehensive Cancer Center and chief executive officer of the Arthur G. James Cancer Hospital and Richard J. Solove Research Institute.

"Ultimately, these collaborations can be the catalyst for new, more effective cancer treatments, leading to better outcomes, faster responses, fewer side effects and more hope for [cancer](#) patients everywhere," said Caligiuri.

These technologies were developed by a team of university-based researchers who work extensively with the affected patient population and actively explore new drug delivery methods such as the oral patch.

Susan R. Mallery , DDS, PhD, professor and interim chair of the division of oral pathology and radiology at the Ohio State College of Dentistry and member of the OSUCCC – James Molecular Carcinogenesis/Chemoprevention Research Program, worked alongside Steve P. Schwendeman, PhD, Ara G. Paul Professor and Chair of the Department of Pharmaceutical Sciences, Professor of Biomedical Engineering, at the Biointerfaces Institute, University of Michigan, and his former assistant research scientist, Kashappa Goud Desai, PhD, to invent this breakthrough technology.

"The oral patch sidesteps any toxicity issues, which have historically been a problem with conventional treatments," said Mallery. "This technology delivers an excellent chemopreventive compound directly to the precancerous tissues."

"Dr. Mallery and I have collaborated for years on translational research projects," said Schwendeman. "It is very gratifying to see our efforts progress past the preclinical state and into clinical trials where we can directly help patients."

The College of Dentistry at Ohio State saw great things for the collaboration between the two universities. "Having two College of Dentistry faculty members from Ohio State engage with researchers from the University of Michigan resulted in a very innovative approach that will dramatically improve patient care and outcomes," said Dean Patrick Lloyd, College of Dentistry. "Conducting the clinical trials for this innovation at Ohio State's College of Dentistry is very promising for the technology and prospective patients, and beneficial to both universities on a national level."

Provided by Ohio State University Medical Center

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