

Century-old drug repurposed to fight diabetic foot ulcers

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Suramin, a 100-year old drug used to treat sleeping sickness, has been repurposed to fight oral mucositis and diabetic foot ulcers, according to University at Buffalo-supported research.

The breakthrough, led by researchers at the University of Arizona with the support of Keith Kirkwood, DDS, Ph.D., Centennial Endowed Chair and professor of oral biology in the UB School of Dental Medicine, has the potential to benefit thousands of patients whose current healing options are either partially effective or painful and invasive.

"Our [early studies](#) with Suramin to reduce the severity of oral mucositis have been promising. The current challenge is to develop novel topical delivery strategies that could be taken into the clinical stage," says Kirkwood, whose research focuses on oral cancer progression.

Oral mucositis—or ulcers and sores of the mouth and throat—is a common side effect of chemotherapy and radiation in patients with head and neck cancer. About 40% of patients who

receive chemotherapy and nearly all patients who receive radiation develop oral mucositis, according to the Centers for Disease Control. This side effect is riddled with symptoms, such as trouble breathing, swallowing and eating, as well as intense pain. If left untreated, these sores can lead to life-threatening infections.

People with diabetes face a similar problem: [diabetic foot ulcers](#). These ulcers, the most common complication that diabetic patients experience, directly result in 85% of diabetes-related amputations, according to the American College of Physicians.

Suramin, the researchers discovered, is effective for [wound healing](#) and well-equipped to meet the needs of diabetic and cancer patient populations. The researchers have begun to commercialize the medication in a series of easy-to-use, topical creams, ointments and gels.

Provided by University at Buffalo

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