

## New radiation treatment significantly increases survival rate

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A novel drug that mimics a naturally occurring molecule found in coffee and blueberries has been developed to treat radiation exposure. Charles R. Yates, Pharm.D., Ph.D., and colleagues Duane Miller, Ph.D., and Waleed Gaber, Ph.D., from the University of Tennessee Health Science Center and Baylor College of Medicine, show that application of this drug, starting 24 hours after radiation exposure, increases survival in animal models by three-fold compared to placebo.

Their work, which is funded through an NIH grant from the National Institute for Allergy and Infectious Diseases, is being presented at the 2012 American Association of Pharmaceutical Scientists (AAPS) Annual Meeting and Exposition, the world's largest pharmaceutical sciences meeting, in Chicago, Ill., Oct. 14 - 18.

"Development of drugs for individuals who are exposed to high-<u>dose</u> <u>radiation</u> in a <u>public health emergency</u> has been a priority since the 9/11 terrorist attacks," said Yates. "The ultimate goal is wide dissemination of non-invasive treatments after 24 hours of a mass casualty."

The high risk of vomiting after <u>radiation exposure</u> proves problematic for oral treatments, the most common non-invasive delivery method. Injectable medication is often proposed as the next line of defense, which comes with its own challenges. For example, training is often required for injections. To combat this problem, Yates and his team designed a new delivery system that can be applied directly to the skin, similar to an adhesive bandage.



"We are extremely proud to have exclusive rights to this exciting technology," said W. Shannon McCool, D.Ph., president & CEO of RxBio, the entity that has licensed the technology from the University of Tennessee Research Foundation.

This drug is also highly effective in models where radiation exposure is combined with skin wounds – a likely scenario in which people are exposed to shrapnel from dirty bombs or associated burn wounds.

Provided by American Association of Pharmaceutical Scientists

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