Breakthrough Technology Minimizes The Effects Of Radiation Exposure

University of Tennessee

Exposure to high levels of ionizing radiation can result in widespread cell damage, failing organ systems or even death. Now a new product developed at the University of Tennessee in Memphis—RX100—can help people survive potentially lethal doses of whole-body radiation, up to 24 hours after exposure.

RX100 was developed in 2004 at University of Tennessee's Health Science Center by Gabor Tigyi, M.D., Duane Miller, Ph.D., and Rusty Johnson, Ph.D. Initial research was supported by the National Institutes of Health.

> *Prior to the development of RX100, there was no protective treatment (radioprotectant) that could prevent damage if administered after the exposure occurred. RX100 is the first radioprotectant that boosts the immune system and promotes and sustains cell survival, avoiding massive cell death and organ failure.*

It is also highly effective at protecting rapidly growing cells, such as those in the blood or the small intestine. RX100 also protects the mucosal lining of the intestines, preventing diarrhea and combating bacterial infections.

Studies have shown that RX100 can prevent death if given before or during lethal radiation exposure — and rescue life if administered up to 24 hours after lethal, whole-body radiation exposure. This remarkable compound can be formulated for a wide range of patient types, from infants to the elderly.

RxBio, Inc., a biotechnology startup founded by the research team, continues to study and develop RX100. Applications abound in fields where exposure to ionizing radiation is possible, including health care and military or defense applications. The company's discoveries have generated major interest from several U.S. government agencies and departments.

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