

Researchers discover molecular approach to promote cancer cell death

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Electron microscopic image of a single human lymphocyte. Credit: Dr. Triche National Cancer Institute

Lung cancer researchers at Winship Cancer Institute of Emory University have discovered a novel strategy to exploit apoptosis, a form of programmed cell death, for the treatment of lung cancer. The protein Bcl-2 is a known target for cancer treatment since it allows cancer cells to evade cell death via apoptosis.

Lead study author Xingming Deng, MD, PhD, a Winship cancer biologist, and his colleagues have discovered an entirely new class of compounds that act by binding to the BH4 domain of Bcl-2 to inhibit its function. The binding of the potential drug results in Bcl-2 being converted from its role of providing survival advantage to cancer cells to that of promoting death of [cancer cells](#). Though this strategy was primarily studied in [lung cancer](#) models, it could be widely applicable to other cancer types as well. The findings were published online today (May 21) in the journal *Cancer Cell*.

"Discovery of the Bcl2 BH4 antagonist as the way to promote cancer [cell death](#) may provide a new weapon against lung cancer," says Deng, who is also an associate professor in Emory's Department of Radiation Oncology.

"This potential drug identified by Dr. Deng and our Winship team may accelerate our success against lung and other cancers. We are now testing this molecule further in preparation for future testing among eligible patients," says co-author Walter J. Curran, Jr., MD, Winship's executive director.

Provided by Emory University

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