

Mechanisms ID'd for curcumin resensitization of cancer cells

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(HealthDay)—Curcumin can resensitize chemoresistant pancreatic

ductal adenocarcinoma (PDAC) cells through inhibition of the polycomb repressive complex 2 (PRC2)-PVT1-c-Myc axis, according to a study published online July 17 in *Carcinogenesis*.

Noting that curcumin can overcome de-novo chemoresistance and resensitize tumors to chemotherapeutic agents, Kazuhiro Yoshida, M.D., from the Baylor University Medical Center in Dallas, and colleagues examined the underlying mechanisms for curcumin-mediated chemosensitization.

The researchers reported the resensitization of chemoresistant PDAC cells by curcumin through [inhibition](#) of the PRC2-PVT1-c-Myc axis. Curcumin sensitized chemoresistant cancer cells inhibited expression of the PRC2 subunit enhancer of zeste homolog-2 and its related long non-coding RNA PVT1 using gemcitabine-resistant PDAC cell lines. Curcumin also prevented spheroid formation and down-regulated several genes driving self-renewal. In vitro findings were confirmed in a xenograft mouse model, with inhibition of gemcitabine-resistant tumor growth by curcumin.

"Overall, this study establishes clinical relevance for combining curcumin with chemotherapy to overcome chemoresistance in PDAC," the authors write.

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)

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