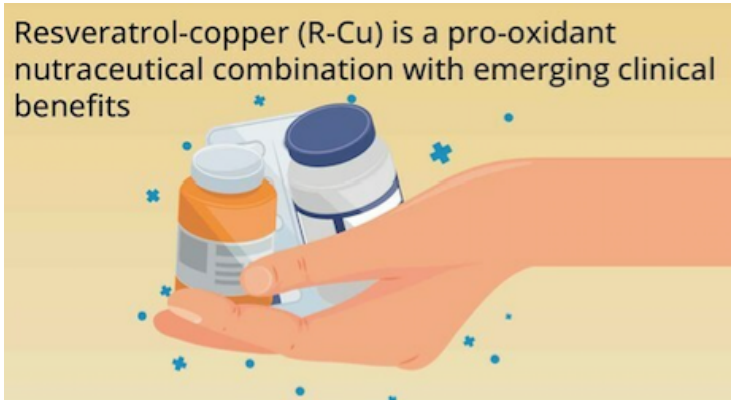
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Researchers at ACTREC discover novel therapeutic agent for host of diseases

18 January 2023 | News

Ameliorating various diseases by inactivating cell-free chromatin particles



Chromatin comprises a complex mixture of DNA and proteins and forms the structural basis of chromosomes in the cellular nuclei. When cells die, they release cell-free chromatin particles or cfChPs into the circulatory system. Emerging evidence indicates that cfChPs exert toxic effects by damaging the DNA of healthy cells and activating pro-inflammatory processes.

Researchers from the Advanced Centre for Treatment, Research & Education in Cancer (ACTREC), Tata Memorial Centre (TMC), India, have recently demonstrated therapeutic benefits of a pro-oxidant mixture of resveratrol and copper, R-Cu, in patients undergoing chemotherapy for advanced gastric cancer. Combining R with Cu (R-Cu) leads to the generation of free oxygen radicals which can inactivate the offending cfChPs.

This study was supported by Department of Atomic Energy, Government of India, through its grant CTCTMC to Tata Memorial Centre.

Professor Indraneel Mittra, Dr. Ernest Borges Chair in Translational Research and Professor Emeritus, Department of Surgical Oncology at TMC/ACTREC said, "Our evidence suggests that R-Cu can be a novel, cost-effective, and non-toxic agent which can be used for multiple disease conditions including cancer and metastasis prevention."