

Persicaline, an alkaloid from <i>Salvadora persica</i>, inhibits proliferation and induces apoptosis and cell-cycle arrest in MCF-7 cells		
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<p>Abstract: Cancer, the second leading cause of death globally, is being targeted with natural plant-derived compounds. This study evaluates persicaline, a sulfur-containing imidazoline alkaloid from <i>Salvadora persica</i>, for its anti-cancer effects. The MTT assay demonstrated persicaline's dose-dependent antiproliferative activity against cancer cells. Flow cytometry revealed persicaline-induced G1 cell-cycle arrest and apoptosis in MCF-7 cells. Further analysis showed increased reactive oxygen species (ROS), upregulation of pro-apoptotic markers Bax and caspase-3, and downregulation of anti-apoptotic Bcl-2. These findings indicate that persicaline effectively promotes cancer cell apoptosis and cell-cycle arrest, suggesting its potential as an anticancer agent.</p>		