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Research on synthesis and evaluation of cytotoxic effects of some halogenoethyl derivatives of curcumin

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Summary: *In this study, two halogenoethyl derivatives of curcumin (di-O-(2-chloroethyl)-curcumin (SP1) and di-O-(2-bromoethyl)-curcumin (SP2)) were synthesized. Their structures were confirmed by spectroscopic methods, including IR, MS, and NMR. Their cytotoxic effects were evaluated against two human cancer cell lines, including MCF-5 (breast cancer) and LU-1 (lung cancer). The IC_{50} values of compounds SP1 and SP2 against MCF-7 were 22.36 µM and 34.55 µM, respectively. Meanwhile, the IC_{50} values of compounds SP1 and SP2 for LU-1 were 23.15 µM and 40.42 µM, respectively.*