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EFFECT OF DEXAMETHASONE ON GROWTH AND VIABILITY OF MOUSE MAMMARY TUMOUR CELL LINES, EMT6 AND 4T1

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Abstract

The in-vitro growth of benign (EMT6) and malignant (4T1) mouse mammary tumour cell lines were evaluated following treatment with doses of 0.1, 0.01 and 0.001 mg/mL dexamethasone. The viability and growth of these cells following dexamethasone treatment were determined by cell proliferation and live:dead assays. In cell proliferation assay, both cells were rapidly proliferating in serum-free media after treatment with different concentrations of dexamethasone over 24 hours. Following treatment with 0.1 mg/mL dexamethasone the proliferation of EMT6 cells were significantly increased while the proliferation of 4T1 cells was only slightly significantly increased. The effect was not dose-dependent. Using the live:dead assay, the results for both cell lines were consistent with the that of cell proliferation assay. This study provides preliminary evidence that dexamethasone may induce growth and viability of mouse mammary tumour cell lines, EMT6 and 4T1.

Keywords: mouse mammary tumour cell lines, EMT6, 4T1, dexamethasone