Differential sensitization of cancer cells to doxorubicin by DHA: a role for lipoperoxidation.

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FIGURE LEGENDS

Figure 1. Dose-response curve of doxorubicin in the absence (open squares) or in the presence (open triangles) of DHA 30 µM. Breast cancer cell lines (**A**: MDA-MB-231, **B**: MCF-7, **C**: MCF-7dox) were grown during 7 days with specified concentrations of doxorubicin (in M) without or with DHA 30 µM. Cell viability was measured by MTT method (see Materials and Methods). Shown are fitted curves and mean ± SE from 3 separate experiments in which triplicate measurements were made.

Figure 2. Differential incorporation of DHA among three cell lines (**A**) and lack of relation with intracellular doxorubicin accumulation (**B**). Cells were grown during 7 days without (control: 0.02% ethanol) or with DHA 30 µM (open bar, open symbol). DHA incorporation in membrane phospholipids (mol %) was quantified by gas chromatography after extraction and derivatization of membrane phospholipids. Accumulation of ^{14}C-doxorubicin (pmol/mg proteins) was measured after 3h incubation with doxorubicin 5 µM. Bars are mean ± SD of 2 experiments in triplicate.

Figure 3. Malondialdehyde (nmol/g proteins) and glutathione levels (µmol/g proteins) in the 3 breast cancer cell lines supplemented during 7 days without or with DHA 30 µM. Doxorubicin concentration was 0.05 µM for MDA-MB-231, 0.1 µM for MCF-7 and 7 µM for MCF-7dox cell line. Data are mean ± SD of 8 values and 6 values for malondialdehyde and glutathione, respectively.