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

Karine Maheo, Sophie Vibet, Jean-Paul Steghens, Caroline Dartigeas, Magalie
Lehman, Philippe Bougnoux, Jacques Gore

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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 \pm 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 \pm SD of 2 experiments in triplicate.

Figure 3. Malondialdehyde (nmol/g proteins) and glutathione levels ($\mu\text{mol/g}$ 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 \pm SD of 8 values and 6 values for malondialdehyde and glutathione, respectively.