

## **FIBROBLAST GROWTH FACTOR-2 INHIBITS BLEOMYCIN-INDUCED DNA DAMAGE IN MURINE LUNG ENDOTHELIAL CELLS.**

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Fibroblast Growth Factor-2 (**FGF2**) protects mice from radiation- and LPS-induced lung injury. Here we investigated the effect of FGF2 on DNA damage caused by bleomycin (**BLM**) in mouse lung endothelial cells (**MLEC**), MLEC were treated with 0.1-10ng FGF2/ml for 1 to 4h, and then fixed with formaldehyde and permeabilized in 70% ethanol, or fixed with 95% ethanol/1% acetic acid and stored in PBS. In formaldehyde-fixed cells, DNA strand breaks containing 3'OH were labeled with fluorescein-12-dUTP by nick translation with DNA polymerase. Ethanol/acetic acid-fixed cells were immunostained with antibody to the phosphorylated histone (H) 2A variant, H2Ax (phospho-H2Ax), which accumulates at sites of double strand breakage, and a Cy3-secondary antibody. Cells were finally stained with H33342 to mark DNA. Fluorescence microscopic image intensities of fluorescein for 3'OH labeling, or Cy3 for phosphor-H2Ax, were analyzed. FGF2 inhibited both measures of strand breakage. The results suggest that FGF2 can protect lung EC from BLM-induced single and/or double strand DNA breakage.

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