

Supplemental Material

Epigenetic Alterations in Liver of C57BL/6J Mice after Short-Term Inhalational Exposure to 1,3-Butadiene

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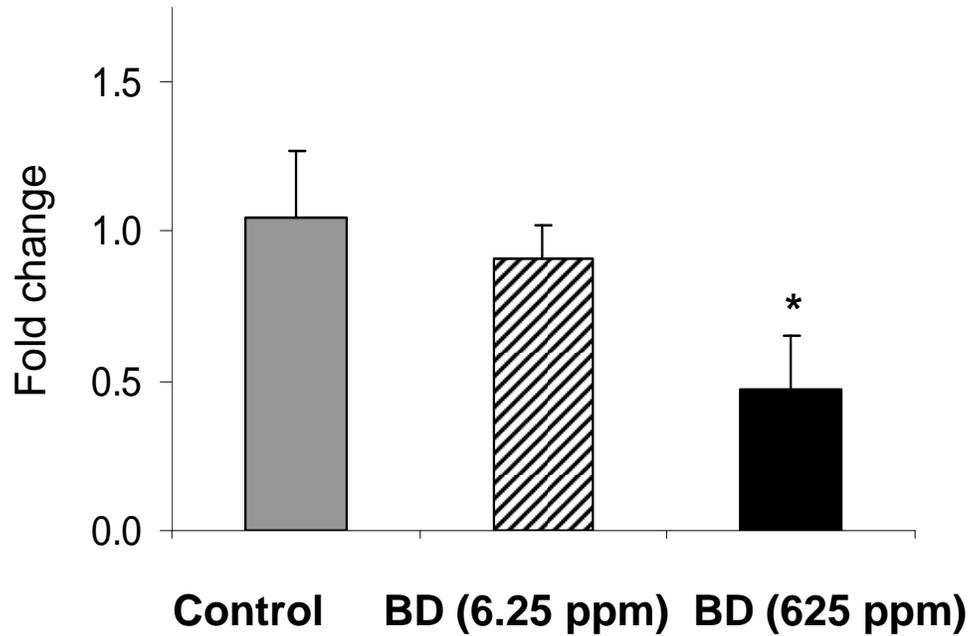
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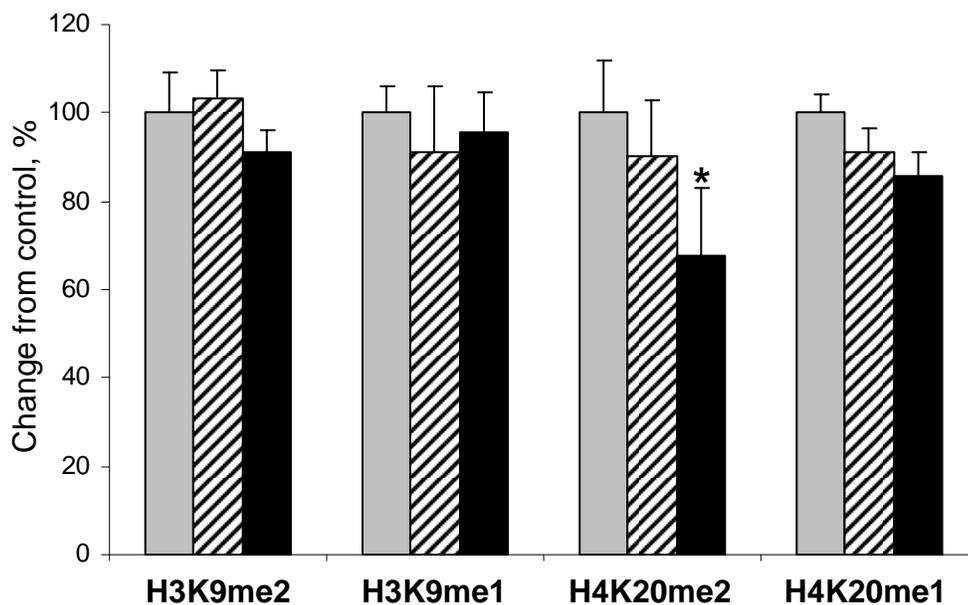
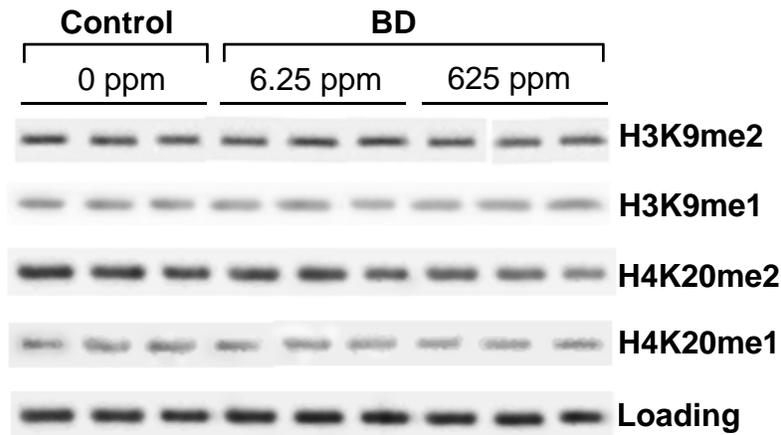
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Supplementary Figure 1. Effects of 1,3-butadiene exposure on the levels of LINE1 methylation in the livers as measured using the MeDIP assay combined with qPCR. The methylation status of LINE1 repetitive elements in the livers of control mice (gray bar) and mice exposed to 6.25 ppm (hatched bar) or 625 ppm (black bar) BD is shown as fold change relative to control group. Asterisks (*) denote significant ($p < 0.05$) difference from control mice.



Supplementary Figure 2. Effects of 1,3-butadiene exposure on dimethylation and monomethylation of histone H3K9 and histone H4K20 in the livers. Acid extracts of total histones were isolated from the livers of control mice (gray bars) and mice exposed to 6.25 ppm (hatched bars) and 625 ppm (black bars), separated by SDS-PAGE, and subjected to immunoblotting using specific antibodies against histone H3K9me2, H3K9me1, H4K20me2, and H4K20me1. Equal sample loading was confirmed by immunostaining against histone H3 (“Loading”) and histone H4 (not shown). Chemiluminescence detection was performed with the HRP Substrate for Western Blotting (Millipore Corporation, Billerica, MA) and measured directly by a BioSpectrum AC Imaging System (Upland, CA). The signal intensity was analyzed by ImageQuant software (Molecular Dynamics, Sunnyvale, CA). Data are presented as mean \pm S.D. (n=5) relative to control mice after correction for the total amount of each histone in the individual samples. Control values were considered as 100%. Representative Western immunoblot images are shown. * - Significantly different from control mice.