



Figure 2: Dynamic loading effect on chondrocyte proliferation, differentiation and survival, *in vitro*. To study the effect of dynamic loading on chondrocyte proliferation, cultures isolated from the lower (LS) or upper (US) sternum were treated with 35 nM RA (35) or vehicle (0) in the absence (Static Load) or presence (Dynamic Load) of low-magnitude, high frequency dynamic loading. Dynamic loading was applied every day for 5 minutes. (A) Chondrocytes were harvested after 5 days and DNA concentration was determined. (B) To investigate the effect of dynamic loading on chondrocyte differentiation, alkaline phosphatase activity was measured spectrophotometrically in cell cultures after 5 days, and normalized to the total DNA content of each sample. (C) Chondrocytes survival was measured after 5 days by a quantitative colorimetric assay using MTT Cell Proliferation Assay Kit. Results are presented as percentage of Control (no load) for the same RA concentration. Values represent the mean + SEM of four different experiments with three replicate cultured cells in each group. * Statistically significant differences between groups ($p > 0.05$).