

Abstract Submitted
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The Effect of Polybutadiene Polymer on Cell Aging In Vitro.¹

YING LIU, LOURDES COLLAZO, MIRIAM RAFAILOVICH, JONATHAN SOKOLOV, Dept. Mat. Sci. & Eng., SUNY Stony Brook, NY 11794 — Cell experimentation often undergoes several weeks of culturing. The most common problem that scientists face is the variability of cell behavior due to subculturing. Most cells have a limited lifespan in vitro, changing their cell characteristic after just a few passages. Here we focus on the changes in cell function with passage. We used human CRF31 dermal fibroblasts initially cultured from lower passages (P11) to higher passages (P20) at a density of 5000/cm². We first generated a series of cell growth curves for the different passages. We observed that as cell passage number increased, cell proliferation decreased significantly. Western Blot analysis indicated that the composition of the extracellular matrix proteins changed with increasing passage. The effect of these changes on migration and actin production will be presented.

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