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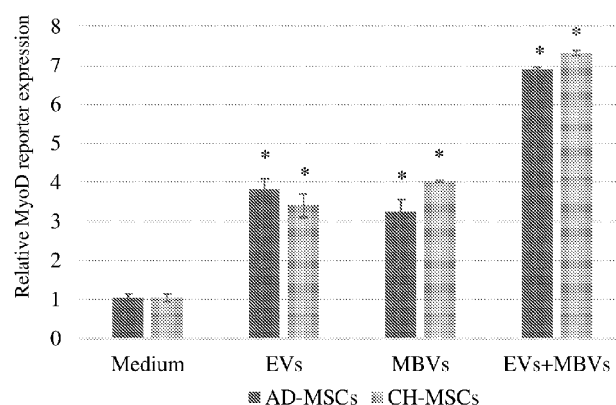
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Figure 1D



(57) Abstract: Methods of differentiating a mesenchymal stromal cell (MSC) to a first non-MSC cell fate, the method comprising contacting the MSC with extracellular vesicles (EVs), matrix-bound vesicles (MBVs) or a combination thereof are provided. Methods of producing artificial tissue by culturing MSCs with two sets of vesicles each comprising EVs, MBVs or both that differentiate MSCs to two different non-MSC cell fates, methods of culturing with reduced growth factors and method of differentiating an MSC to a muscle cell fate are also provided.

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