**Assessment of Extracellular Vesicles From Rabbit Ear Pina Cells**

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**Background:** In recent decades, stem cell technology has been among the most interesting topics. Despite their potential, their disadvantages have drifted researchers' attention towards the great potentials of cellular secretome components, e. g. extracellular vesicles (EVs). Rabbit ear pina is known for its fast regeneration upon injury. Previous studies have shown that cells derived from the same tissues are indicating stemness properties and they can contribute in regeneration in the same way of their tissue of origin.

**Methods:** In this study cells from rabbit ear were cultured in exosome-depleted serum upon reaching proper confluency, and their conditioned medium (CM) was collected. For isolation of EVs from precleared CM, we used ultracentrifuge in 110.000g for 2h in 4oC as the gold standard method Total protein contents were measured by BCA assay and EVs were characterized by particle size analysis, zeta potential analysis, and atomic force microscopy (AFM).

**Results:** The results obtained from BCA assay indicate efficient EV isolation regarding their protein content. Particle size analysis show that the EVs cover a range from 30 to 150 nm in diameter. Moreover, zeta potential analysis confirms that the EV preparations have a good colloidal stability. The images of AFM also confirms their proper integrity and spherical morphology.

**Conclusion:** Blastema cells can secret the EVs and we could isolate them.

**Keywords:** Rabbit Ear Pina Cells, Secretome, Extracellular Vesicles.