

#### 4.Characteristics and Roles of Exosomes in Cardiovascular Disease

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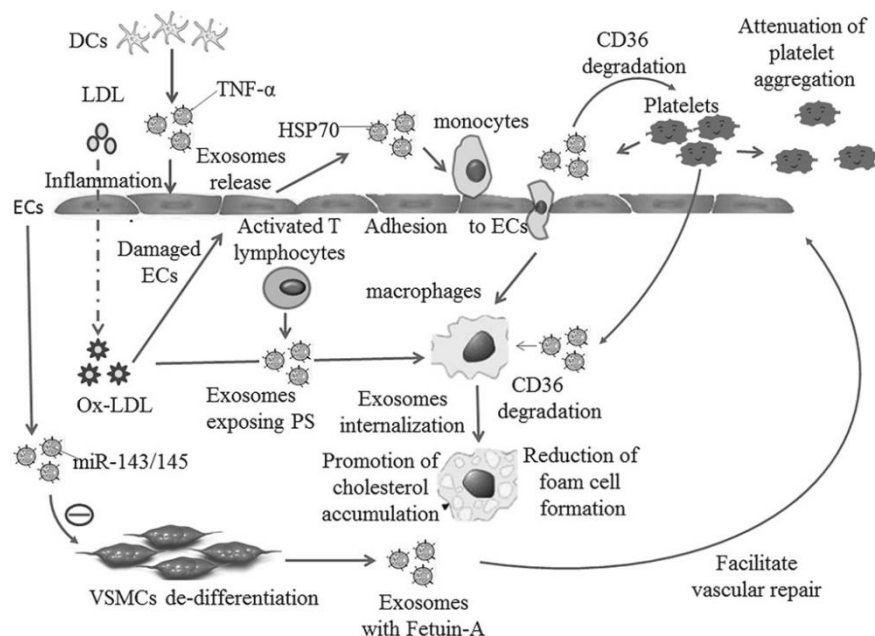
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文章简介

心血管疾病（CVD）是全球死亡的主要原因之一，且发病率和死亡率仍在不断攀升，给社会和医疗保健系统带来了巨大的经济负担。虽然现今临床上对于心脏疾病的诊断及治疗已经发生了巨大的进展，如优化的冠状动脉支架，但是缺血再灌注损伤的结果仍然不能令人满意，且当 CVD 发展为肥大和心力衰竭时则不能逆转。在这种情况下，细胞外囊泡的出现为早期发现心血管疾病风险人群的病理变化提供了新的思路。**本综述总结了外泌体在 CVD 相关的各种生理和病理环境中的性质和作用，对 CVD 领域的外泌体研究提出了关键的几个建设性问题，对于 CVD 领域的细胞外囊泡研究极具参考价值。**



**Fig.** The role of exosomes in atherosclerosis. An outline of the known cellular communication pathways that exosomes are known to participate in with regard to the development of atherosclerosis. For a detailed explanation of the pathways, see text on exosomes in atherosclerosis section. DCs, dendritic cells; ECs, endothelial cells; ox-LDL, oxidized LDL; miR, microRNA; PS, phosphatidylserine;

VSMCs, vascular smooth muscle cells.