

## The Endothelial Cell Secretome as a Factor of Endothelium Reparation: The Role of Small particles

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### Abstract

The secretome is considered a combination of factors produced by cells due to abundant spectrum of autocrine/ paracrine triggers. All these actively synthesizing and secreting factors include proteins, adhesion and intercellular signal molecules, peptides, lipids, free DNAs, microRNAs, and microparticles (MPs). The components of secretome mutually may interact and thereby modify the MPs' structure and functionality. As a result, communicative ability of endothelial cell-derived MPs may sufficiently impair. Subsequently, cross talk between some components of secretome might modulate delivering cargos of MPs and their regenerative and proliferative capabilities via intercellular signaling networks. The aim of the review is to discuss the effect of various components of secretome on MP-dependent effects on endothelium.

The variable spectrum of paracrine factors secreted by cells due to specific and non-specific triggers with exerted biological effects on target cells is determined by secretome. By now, the secretome is considered a collection of factors consisting of transmembrane proteins and other components actively secreted by cells into the extracellular space. All these synthesizing and secreting factors include proteins, adhesion and intercellular signal molecules, peptides, lipids, free DNAs, microRNAs, and extracellular vesicles (i.e., exosomes and MPs). A significant portion (roughly 20%) of the human secretome consists of secretory proteins incorporated into microvesicles.