

Mitochondrial dynamics: A potential new therapeutic target for heart failure

Dinámica mitocondrial: un potencial nuevo blanco terapéutico para la insuficiencia cardíaca

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Mitochondria are dynamic organelles able to vary their morphology between elongated interconnected mitochondrial networks and fragmented disconnected arrays, through events of mitochondrial fusion and fission, respectively. These events allow the transmission of signaling messengers and exchange of metabolites within the cell. They have also been implicated in a variety of biological processes including embryonic development, metabolism, apoptosis, and autophagy. Although the majority of these studies have been confined to noncardiac cells, emerging evidence suggests that changes in mitochondrial morphology could participate in cardiac development, the response to ischemia-reperfusion injury, heart failure, and diabetes mellitus. In this article, we review how the mitochondrial dynamics are altered in different cardiac pathologies, with special emphasis on heart failure, and how this knowledge may provide new therapeutic targets for

