



# ARC EN EPOC III

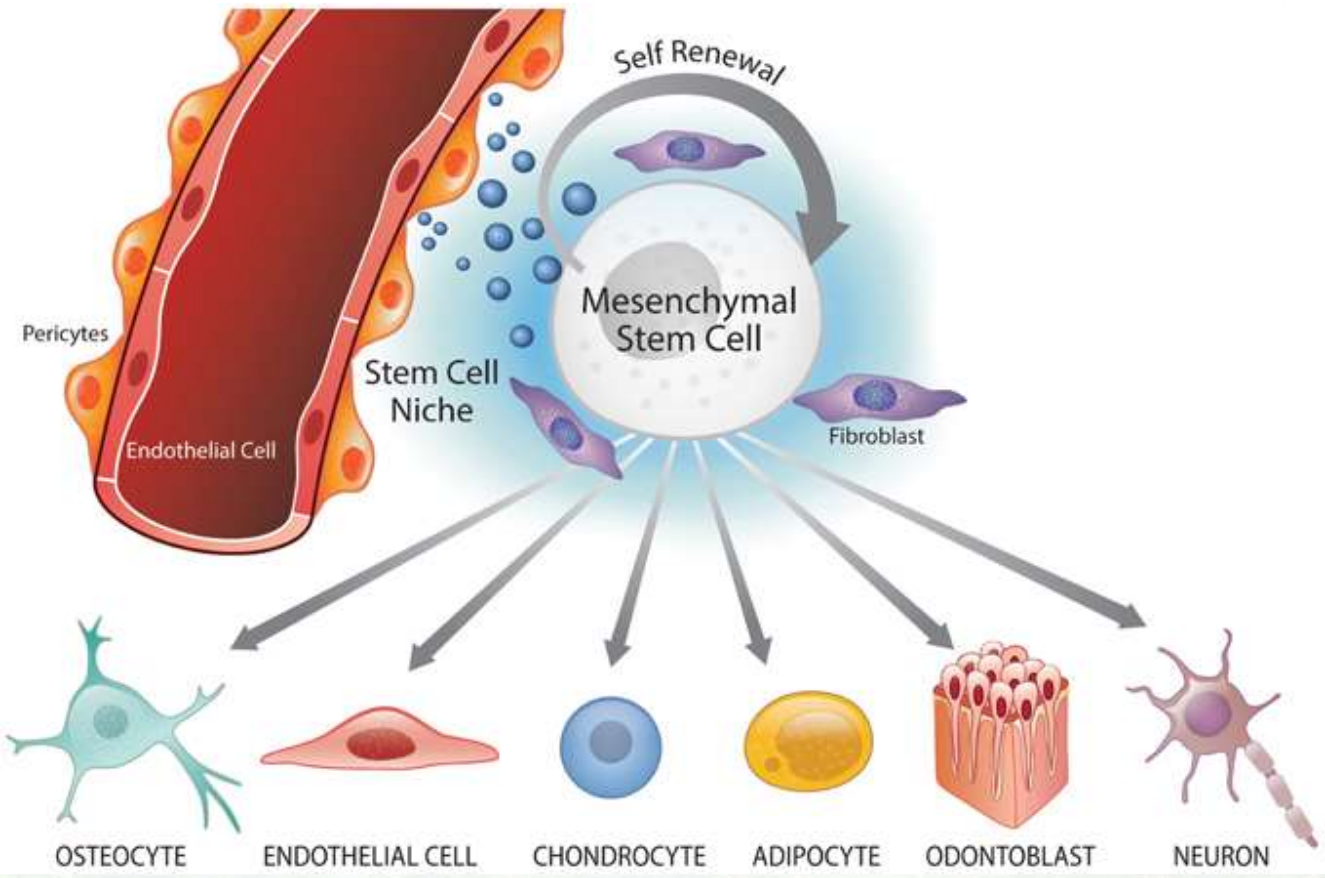
Annual Review of Congresses EN EPOC

Descubriendo lo nuevo en EPOC presentado en ATS, ERS y SEPAR

**ERS - Therapeutic effects of human perivascular stem cells in an emphysema mouse model.**

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# Therapeutic effects of human perivascular stem cells in an emphysema mouse model



## Introduction

Perivascular stem cells (PVCs) have been considered as a promising source of mesenchymal progenitors for cell-based therapy due to their greater regenerative potential. However, the therapeutic effects of PVCs in pulmonary diseases have not been investigated.

## Aim

We investigated the therapeutic effects of PVCs in an emphysema mouse model and understand the molecular mechanisms underlying alveolar epithelial repair.

## Methods

We isolated PVCs from human umbilical cords of pregnant women with IRB-approved written consent at KNUH. We collected the conditioned medium (CM) from PVC cultures and intratracheally injected it into an emphysema mouse model induced by elastase. We performed histological and biochemical analysis to determine the therapeutic effects of PVCs in lung injury.

## Results

Emphysema mouse lung injected with PVC-CM were recovered by a significant reduction in the MLI ( $84.6 \pm 2.1$  mm) compared with the MLI of control mice ( $100.1 \pm 3.6$  mm). In addition, expression levels of keratinocyte growth factor, as known for regulating pulmonary epithelial cell proliferation and surfactant protein, were increased.

## Conclusions

We demonstrated that lung injury was ameliorated by PVC-CM, which could be an alternative source for cell-based therapy in pulmonary diseases.

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The image features the Ferrer logo, which consists of a stylized 'F' icon in teal and lime green, followed by the word 'ferrer' in a bold, black, lowercase sans-serif font. The logo is centered in the upper half of the frame. The background is a vibrant landscape of a green field with several stalks of grain in the foreground, set against a bright blue sky filled with scattered white clouds. The entire scene is framed by a solid purple border.

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