



# Understanding the impact of the lung microenvironment to enhance the therapeutic potential of mesenchymal stromal cells for acute respiratory distress syndrome

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**An enhanced understanding of the impact of the lung microenvironment on exogenously administered mesenchymal stromal cells has the potential to enhance their therapeutic potential for ARDS** <https://bit.ly/2S2fQ1l>

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Acute respiratory distress syndrome (ARDS) is a clinical syndrome of severe acute hypoxaemic respiratory failure with clinical features including reduced lung compliance and permeability-induced pulmonary oedema, which can frequently progress to multiple organ failure [1, 2]. ARDS occurs in 10% of all critically patients in ICU and nearly one quarter of all mechanically ventilated patients [3]. Common underlying causes of ARDS include bacterial or viral pneumonia, sepsis, pulmonary aspiration and trauma [4]. The burden of ARDS is substantial, with hospital mortality rates varying, depending on ARDS severity, from 30–45% of affected patients [5]. Of further concern, ARDS survivors are often left with debilitating long-term sequelae which reduces their quality of life.