



Pseudomonas aeruginosa membrane vesicles cause endothelial barrier failure and lung injury

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Membrane vesicles released by *Pseudomonas aeruginosa* PA14 can elicit septic acute lung injury due to loss of endothelial barrier integrity and inflammasome activation <https://bit.ly/3gMnkPu>

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To the Editor:

Sepsis is a common cause of lung hyperinflammation and barrier failure, resulting in acute respiratory distress syndrome (ARDS). Despite antibiotics, mortality from bacterial sepsis increases in the developed world, suggesting injurious mechanisms beyond live bacteria. In addition to bacterial toxins, membrane vesicles (MVs) may present potential mechanisms of organ failure in sepsis. Bacterial MVs are extracellular vesicles formed from bacterial membranes [1] that can elicit systemic inflammatory responses, e.g. by inflammasome activation [2, 3]. Here, we tested whether MVs from a relevant sepsis pathogen, *Pseudomonas aeruginosa*, were sufficient to cause characteristic signs of acute lung injury (ALI), the preclinical analogue to ARDS, *in vitro* and *in vivo*.