

New drug may be the breath of life in intensive care

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A new drug to treat potentially fatal lung injuries caused by ventilators in hospital intensive care units is being developed by Flinders University researchers.

Ms Alison Elder, a PhD candidate in the Department of [Critical Care Medicine](#), and her colleagues have trialled feG, a new anti-inflammatory drug that is successful in treating [bacterial pneumonia](#) and [acute pancreatitis](#), in models of lung injury in rats.

They found the drug may be able to both prevent and effectively treat ventilator-induced lung injury.

“Ventilators are essential to keep people breathing in intensive care, but can also cause deadly lung damage by forcefully stretching the delicate tissues of the lung,” Ms Elder said.

“By significantly reducing lung damage and improving respiratory function this drug could reduce patient mortality in the [intensive care unit](#),” she said.

Stretching of the lung tissue triggers our immune system to release chemicals that cause inflammation. This can result in further tissue damage, impaired oxygen exchange and fluid accumulation in the lung, leading to death.

“The drug works in three ways: it decreases the infiltration of the

inflammatory cells into the lung; it decreases their activation; and it encourages resolution of the injury within the lung,” Ms. Elder said.

Mortality rates for patients with acute [lung injury](#) increase from 24 per cent for patients 15-19 years old up to 60 per cent for patients 85 years and older, and it is also a significant financial burden for the health system.

The drug, which is based on a natural substance found in the salivary glands of rats, is currently being tested for treating asthma in Phase 1 trials by collaborators in Canada.

“Since patient safety testing has already begun in the asthma study, we are hoping to be in a position to start clinical trials here in Adelaide within the next few years.”

Provided by Flinders University

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