BIODIESEL SAFER:
A BETTER OPTION FOR AVOIDING LUNG DISEASE

Biodiesel is less polluting than regular diesel fuel, and the difference could save lives according to Associate Professor Leigh Ackland and her team at the School of Life and Environmental Sciences, Deakin University.

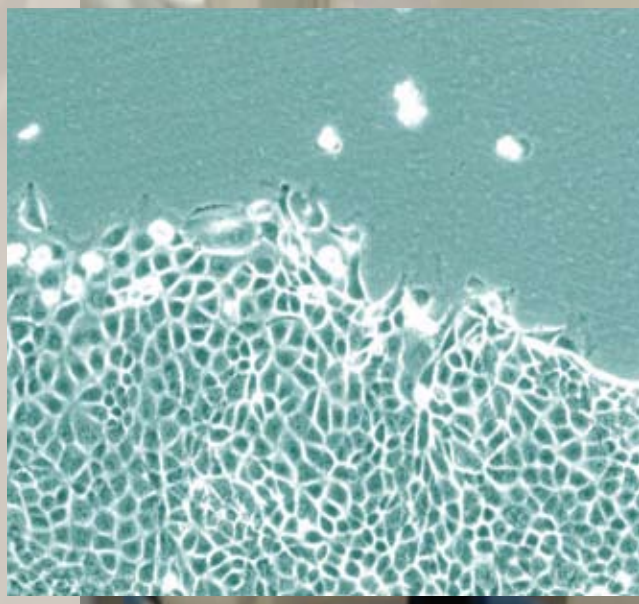
An estimated 200 000 people die every year in Europe because of particle pollutants in the air. Diesel exhaust is a major source of these particles, which contribute to diseases like asthma and emphysema.

"We compared the effects of tiny particles from both biodiesel fuel – made from vegetable oils – and regular diesel by looking at how they can damage the cells of our airways," says Leigh.

"We exposed cells grown in the lab to particles obtained from exhaust fumes. We found that the particles damage the cells in two ways: by causing cells of the lungs and airways to fuse together, forming giant 'multinucleate' cells like those seen in the lungs of coal miners; and secondly by triggering apoptosis or 'cell suicide'."

While there is debate around the overall benefits of choosing biodiesel fuel, it does mean lower greenhouse emissions. This research now shows it also means safer exhaust fumes.

This project is part of a new collaboration between Deakin University and China – a research consortium including the Institute of Applied Ecology at the Chinese Academy of Sciences and the University of Shenyang.



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FURTHER INFORMATION:
Leigh Ackland,
Associate Head, School of Life and Environmental Sciences
E: leigh.ackland@deakin.edu.au
www.deakin.edu.au/scitech/les/research/rpa/cmb/ccmb/index.php