

New X-ray imaging developed by scientists

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Scientists have developed an x-ray imaging system that enables researchers to see 'live' how effective treatments are for cystic fibrosis.

Published in the *American Journal of Respiratory and Critical Care Medicine*, the imaging method allows researchers to monitor the effectiveness of a treatment for the life-threatening genetic disorder.

Cystic fibrosis affects many of the body's systems, but most severely the lungs, and currently it can take several months to measure how effective treatment is for the early-fatal [lung](#) disease.

Dr Kaye Morgan, lead researcher on the paper from Monash University, said the new x-ray imaging method allows researchers to look at soft tissue structures, for example the brain, airways and lungs, which are effectively invisible in conventional x-ray images.

"At the moment we typically need to wait for a [cystic fibrosis](#) treatment to have an effect on lung health, measured by either a lung CT scan or breath measurement, to see how effective that treatment is," Dr Morgan said.

"However the new imaging method allows us for the first time to non-invasively see how the treatment is working 'live' on the airway surface."

Dr Morgan said this x-ray imaging method would enable doctors and researchers to measure how effective treatments are, and progress new treatments to the clinic at a much quicker rate, a key goal of co-authors

Dr Martin Donnelley and Dr David Parsons of the CF Gene Therapy group at the Women's and Children's Hospital and the University of Adelaide's Robinson Research Institute.

"Because we will be able to see how effectively treatments are working straight away, we'll be able to develop new treatments a lot more quickly, and help better treat people with cystic fibrosis," Dr Morgan said.

Dr Morgan said the new imaging method, which was developed using a synchrotron x-ray source, may also open up possibilities in assessing how effective treatments were for other lung, heart and brain diseases.

Provided by Monash University

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