

cyclomedica technegas ultralute

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## INITIAL RESULTS FROM CHINESE TECHNEGAS TRIALS DEMONSTRATE EFFICACY FOR DIAGNOSIS AND MANAGEMENT OF CHRONIC LUNG DISEASE

Cyclopharm Limited (ASX: CYC) is delighted to announce that the preliminary findings of the ongoing trials of Cyclopharm's Technegas in China have shown the lung imaging technology is an effective tool in the diagnosis of Chronic Obstructive Pulmonary Disease (COPD), one of the leading causes of death worldwide.

- In 2013, CYC commenced trials in China of the efficacy of Technegas in the early detection and management of COPD
- CYC estimates the COPD market is 15 to 20 times larger than the market in which Technegas is currently predominantly used
- 1 in 5 Australians can expect to suffer from COPD in their lifetime
- CYC will continue to accept new patients into its ongoing trial until 31 March 2016, with final trial results expected in Sept quarter, 2016
- Initial results indicate Technegas allows clinicians to diagnose COPD before alternative technologies and effectively measure ongoing COPD treatment

Cyclopharm Managing Director, Mr James McBrayer, said "The preliminary results of the trials showed Technegas was effective at diagnosing the extent of emphysema in trial patients and at an earlier stage of the disease than standard diagnostic methods."

"It was more accurate at measuring impairment in lung function and therefore better able to monitor the effectiveness of treatment."

COPD is an umbrella term for progressive lung diseases that limit airflow to the lungs, including emphysema. It is predicted to become the third leading cause of death worldwide by 2020 and is particularly common in China due to air pollution and high rates of smoking. In China, it has been estimated that there will be 65 million deaths from COPD and 18 million deaths from lung cancer between 2003 and 2033. In Australia, 1 in 5 Australians can expect to suffer from COPD in their lifetime.

"The implications of these findings for Technegas and its utility as a diagnostic tool in a variety of respiratory morbidities are profound," Mr McBrayer said.

"Current lung function tests such as Spirometry cannot adequately quantify residual lung function, particularly in the severely damaged lungs often seen in COPD patients."



Diagnosing COPD early enough in the progression of the disease, when it may still be able to be slowed or halted, remains clinically elusive with current methods. Most often, by the time patients present to a doctor their condition has already progressed to mid or late stage COPD.

These findings come after a 2013 study published in the North American Journal of Nuclear Medicine demonstrated that Technegas detected changes in lung ventilation and perfusion before structural changes in the lungs were detected by CT scans. Further, a study published in the January 2015 Annals of Nuclear Medicine found that ventilation scans with Technegas can detect ventilatory impairment and airway obstruction even in apparently healthy long-term smokers not shown with Spirometry or CT scans.

Technegas is already used in hundreds of hospitals worldwide, chiefly for the diagnosis of pulmonary embolism. It is sold in 55 countries across Asia, Europe and North America, including China, and produced \$11.5 million in revenue for Cyclopharm in FY2014.

The Company expects that, over the medium term, the COPD diagnosis and treatment market offers a significant growth opportunity for Technegas sales.

For more information, please contact:

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#### Background

#### Cyclopharm Limited

Cyclopharm is a radiopharmaceutical company servicing the global medical community. The Company's mission is to provide nuclear medicine and other clinicians with the ability to improve patient care outcomes.

Cyclopharm achieves this objective through the provision of radiopharmaceutical products, Technegas (for lung imaging) and Molecular Imaging (used in cancer, brain and cardiac imaging). Our customers are nuclear medicine departments located within hospitals and clinics.

#### Technegas

Technegas is a structured ultra-fine dispersion of radioactive labeled carbon. Technegas is produced by drying Technetium-99m, (the most commonly used isotope in nuclear medicine imaging), in a carbon crucible then heating the isotope for a few seconds at around 2,700°C in a Technegas Generator. The resultant gas-like substance is inhaled by the patient (referred to as lung ventilation) via our consumable product known as a Patient Administration Set (PAS).

The inhaled Technegas particles enables multiple views and tomography imaging under a gamma or single photon emission computed tomography (SPECT) camera for the superior functional ventilation imaging primarily used to diagnose pulmonary emboli (blood clots in the lungs).

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Cyclopharm's Ultralute<sup>™</sup> technology extends the useful life of Molybdenum-99 (Mo-99) generators by up to an additional 50%. This technology potentially gives nuclear medicine departments the ability to dramatically improve their operating efficiencies, cost of materials and health outcomes for patients.