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## **New peer reviewed study reveals Technegas™ potential as a valuable tool for the diagnosis and management of ‘Long COVID’**

### **Highlights:**

- **Results of an independent peer reviewed study by McMaster University in Ontario were presented at last week’s American Thoracic Society Meeting in San Francisco**
- **Findings included the key role of Technegas™ in both the diagnosis and the ongoing management of Long COVID symptoms**
- **Study creates opportunity to extend engagement regarding Technegas™ from its current core nuclear medicine customers to respiratory medicine referrers globally**
- **Study underscores Cyclopharm’s ‘Beyond PE’ strategy in demonstrating the role of Technegas™ for wider indications**

Cyclopharm Limited (ASX: CYC) today advises the Company’s proprietary technology Technegas™, has been shown to have a key role in the diagnosis and management of patients who are experiencing ongoing impacts from COVID-19.

In a peer reviewed article published in the Canadian Journal of Respiratory, Critical Care and Sleep Medicine, researchers at McMaster University in Ontario Canada using the imaging method VQ-SPECT-CT<sup>1</sup> with Cyclopharm’s proprietary ventilation radiopharmaceutical Technegas™ found the technique had the potential to be *“a valuable tool for clinicians in the management of patients who are being evaluated after COVID-19 as it permits objective evaluation of functional lung impairment that may underly and help explain post-COVID-19 symptoms”*.

The study concluded that the *“(Technegas™) imaging study revealed ventilation impairment in individuals with no history of lung disease recovering from noncritical COVID-19 that was associated with parenchymal opacities, respiratory symptoms and exercise-capacity.”*

The Long Covid study demonstrated the efficacy of Technegas™ in assessing impairment to lung function in individuals, with no history of lung disease, 4-weeks after recovery from non-critical COVID-19. The paper concluded by stating *“The temporal trajectories and long-term consequences of the early functional abnormalities we report are unknown and will be explored through follow-up of the same individuals.”*

As part of its industry research engagement program, Cyclopharm assisted with the funding of the study, the findings of which were presented to the American Thoracic Society Annual Conference<sup>2</sup> (“Long Covid

<sup>1</sup> VQ-SPECT-CT – Ventilation Perfusion Single Photon Emission computerised tomography with computed tomography is a multimodality imaging technique that combines nuclear medicine functional imaging with an anatomical reference using CT

<sup>2</sup> Life And Lungs After Covid: Functional Recovery And Outcomes Following Sars-Cov2 Infection.

<https://www.abstractsonline.com/pp8/#!/10476/presentation/7406>

Study”) on 17 May 2022 and subsequently published in the Canadian Journal of Respiratory, Critical Care, and Sleep Medicine<sup>3</sup>.

The authors highlighted the utility of Technegas™ in the study by stating “*Technegas™ is a widely available and guideline supported nuclear medicine ventilation imaging agent that behaves in a gas-like manner because of its small particle size permitting peripheral penetration and alveolar deposition.*”

As previously outlined<sup>4</sup>, Cyclopharm’s Beyond PE strategy is designed to develop new functional lung diagnostic applications and new business growth opportunities by expanding the use of Technegas™ beyond the diagnosis and management of Pulmonary Embolism. To drive this strategy, the Company is supporting several studies and pilot clinical trials targeted at respiratory medical referrers and researchers. The strategy includes supporting studies into the use of Technegas™ in the diagnosis and patient management of alternative disease states, such as Long COVID, COPD<sup>5</sup>, asthma and lung cancer, for the purpose of underpinning substantial increases in the use of Technegas™ globally.

Cyclopharm Managing Director and CEO, James McBrayer, said, “We believe the outcomes of this Long COVID study, utilising existing installed infrastructure, support the tremendous potential of Cyclopharm’s Beyond PE strategy and the ability of the Technegas™ technology to offer meaningful benefits to clinicians and patients managing the ongoing impacts of COVID 19 infections.”

“A recent paper published by the USA Center for Disease Control<sup>6</sup> estimated that the proportion of people with COVID-19 to go on to experience post-COVID conditions can vary from 13.3% at one month or longer after infection; 2.5% at three months or longer, based on self-reporting; to more than 30% at 6 months among patients who were hospitalised.”

“This Long COVID study by McMaster University presented at the American Thoracic Society Annual Conference and published in the Canadian Journal of Respiratory, Critical Care and Sleep Medicine last week are examples of how Cyclopharm is delivering on its strategy to promote the benefits of Technegas™ directly to Respiratory Medicine referrers beyond our traditional Nuclear Medicine customers. It also underscores our Beyond PE initiatives in the diagnosis and patient management of chronic conditions. Expansion into indications such as Long COVID, COPD, asthma and lung cancer will support substantial value creation for Cyclopharm’s shareholders.”

[ENDS]

This ASX announcement was approved and authorised for release by James McBrayer, Managing Director, CEO and Company Secretary.

**For more information, please refer to our website at [www.cyclopharm.com](http://www.cyclopharm.com) or contact:**

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<sup>3</sup> Ventilation and perfusion abnormalities following recovery from noncritical COVID-19, Canadian Journal of Respiratory, Critical Care, and Sleep Medicine, 20 June 2022, DOI: 10.1080/24745332.2022.2054047 (<https://doi.org/10.1080/24745332.2022.2054047>)

<sup>4</sup> Cyclopharm Limited, Preliminary Final report, Release via the ASX on 27, Feb 2019.

<sup>5</sup> COPD – Chronic Obstructive Pulmonary Disease

<sup>6</sup> <https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html>

### **Cyclopharm Limited**

Cyclopharm is an ASX Listed 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 primarily through the provision of its core radiopharmaceutical product, Technegas™ used in functional lung ventilation imaging.

### **Technegas™**

The Technegas™ technology is a structured ultra-fine dispersion of radioactive labelled carbon, produced by using dried Technetium-99m in a carbon crucible, micro furnaced for a few seconds at around 2,700° C. The resultant gas like substance is inhaled by the patient (lung ventilation) via a breathing apparatus, which then allows multiple views and tomography imaging under a gamma or single photon emission computed tomography (SPECT) camera for evaluating functional ventilation imaging. Historically used in the diagnosis of pulmonary embolism, Technegas™, together with advancements in complementary technology to multimodality imaging and analytical software, is being used in other disease states to include COPD, asthma, pulmonary hypertension and certain interventional applications to include lobectomies in lung cancer and lung volume reduction surgery.