

18 April 2013

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# Cyclopharm Develops New Nuclear Medicine Technology: Ultralute

The Directors of Cyclopharm Limited (ASX: CYC) Australia's leading nuclear medicine company, are pleased to advise that the company has developed a unique proprietary patented technology, Ultralute.

Ultralute extends the useful life of the world's most common nuclear medicine radioisotope by up to 50%. Applications include cardiac, bone, liver, brain, renal and lung imaging.

Commenting on the announcement, Cyclopharm's Director of Science, Professor Nabil Morcos said, "By extending the useful life of Mollybdenum-99 generators, Ultralute has the potential to enable hospitals and health departments globally to dramatically improve their operating efficiencies and health outcomes for patients.

"Initial testing and prototype designs of the Ultralute technology have provided exceptional results.

Cyclopharm's Managing Director and CEO, Mr James McBrayer stated, "We are now moving toward the regulatory approval process while in parallel entering in discussions with potential commercial partners."

Further details of this announcement and Cyclopharm's Ultralute technology are included in the attached letter to be sent to Cyclopharm Shareholders.

## 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 / PET radiopharmaceuticals (used in cancer, brain and cardiac imaging). Our customers are nuclear medicine departments located within hospitals and clinics.

### **Technegas**

The Technegas technology is a structured ultra-fine dispersion of radioactive labeled 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 the superior diagnosis of pulmonary emboli (blood clots in the lungs).

### Positron Emission Tomography (PET)

PET radiopharmaceuticals target specific tissues / organs, concentrate there, and the attached radioisotope emits radiation, which is then detected by a PET or PET / CT gamma (collectively PET camera). These imaging modalities help physicians improve their ability to detect and determine the location, extent and stage of cancer, neurological disorders and cardiac disease at a metabolic level. By improving diagnosis, PET scans aid physicians in selecting better courses of treatment, as well as assessing whether treatment is effective or should be changed at a much earlier stage.



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Dear Shareholder,

## Cyclopharm Develops New Nuclear Medicine Technology: Ultralute

On behalf of the Directors of Cyclopharm Limited, I am pleased to advise Shareholders that your company today announced it has developed a unique proprietary patented technology, Ultralute, that will enable nuclear medicine departments the ability to dramatically improve their operating efficiencies and health outcomes for patients.

Cyclopharm's Ultralute technology extends the useful life of Mollybdenum-99 (Mo-99) generators, a precursor to the Technetium-99m (Tc-99m) isotope, by up to an additional 50%.

Tc-99m is the primary isotope used in diagnostic imaging throughout the world accounting for approximately 80% of all procedures performed in nuclear medicine today. Applications include cardiac, bone, liver, brain, renal and lung imaging.

The life of a Mo-99 generator is dependent on the concentration of the Tc-99m harvested from the generators. The Tc-99m harvested, also referred to as the eluate, is directly related to the amount of Mo-99m remaining in the generator. As the Mo-99 decays there comes a time when the amount of Tc-99m eluted from the generator is so diluted that it becomes virtually unusable.

Mo-99m is produced from only a limited number of nuclear reactors around the world. Shareholders will remember that the Technegas sales in previous years have been impacted by global shortages of Mo-99. These shortages have occurred when sources of this medical isotope have placed their reactors offline for extensive time periods to comply with maintenance and repairs.

Cyclopharm initially focused its research and development expertise to minimise the impact to Technegas relating to possible Mo-99 shortages; however, once developed, the Ultralute technology applications has proven to be far more reaching.

In providing background to the technology, Professor Nabil Morcos, Director of Science for Cyclopharm explained "The principle of Cyclopharm's proprietary patented technology is to provide an "On-Line" process to concentrate the Tc-99m extracted from a generator so that it can be used in preparing radiopharmaceuticals used in Nuclear Medicine diagnostic scans."



Ultralute has been accepted for oral presentation within the next three months further showing the important acceptance of this very valuable contribution by Cyclopharm to the World of Nuclear Medicine."

It is encouraging to see that our early work has been well received. Scientific abstracts have already has been accepted with the Korean, Japanese and North American Societies of Nuclear Medicine. Industry interest in the Ultralute technology continues to accelerate. In June of this year, Professor Marcos has been invited to present the technology at the North American Society of Nuclear Medicine, the largest nuclear medicine meeting of its kind in the world.

Initial testing and prototype designs of the Ultralute technology have provided exceptional results. We are now moving toward the regulatory approval process while in parallel entering in discussions with potential commercial partners.

The company's Technegas technology has already proven itself to contribute to the advancement of nuclear medicine globally. We now look forward to commercialising our Ultralute technology, which has the potential to significantly improve health outcomes for the community and provide the next stage of growth for Cyclopharm.

We look forward to updating you as this exciting new development progresses.

Yours sincerely,

James McBrayer

**Managing Director, CEO and Company Secretary** 

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