



CUMMING GLOBAL CENTRE FOR PANDEMIC THERAPEUTICS

A centre of the Doherty Institute

Major supporting partner



FACT SHEET

Cumming Global Centre for Pandemic Therapeutics

The University of Melbourne has received a significant philanthropic donation in support of The Peter Doherty Institute for Infection and Immunity (Doherty Institute), a joint venture of the University of Melbourne and Royal Melbourne Hospital, to establish the Cumming Global Centre for Pandemic Therapeutics (CGCPT).

This mission-driven, globally connected research program will enable rapid design and development of treatments for pathogens of pandemic potential. The centre will advance the science behind antiviral therapeutics, transforming the management of future pandemics and saving lives.

Located within the Doherty Institute in Melbourne, Australia, the Cumming Global Centre for Pandemic Therapeutics (CGCPT) is named in recognition of the family of the inaugural major donor, Mr Geoff Cumming.

What the centre will do

The CGCPT will develop new technologies to treat future pathogens of pandemic potential.

The centre has an ambitious twenty-year research program with the mission to develop novel platform technologies using a 'plug and play' approach. This means that treatment solutions can be rapidly adapted to a new pathogen within much shorter timeframes than currently possible after a new pathogen is identified.

Effective and timely therapeutics have the potential to transform how the next pandemic is managed, but innovation in therapeutics has lagged in comparison to vaccines. During the first 12 months of the COVID-19 pandemic, AUD\$137 billion was publicly invested globally in vaccines compared to just AUD\$7 billion in therapeutics.

The centre will take advantage initially of new technologies that can directly target the genetic code of pathogens using gene editing and gene silencing, enhancing the innate immune response to target whole families of viruses, not only individual viruses, and will develop better biologics such as antibodies which have broad activity and are cheaper and easy to administer. This is different from current approaches to antiviral drug development, which are more commonly based on small molecules that inhibit specific steps in a virus's life cycle.

The centre will pursue a mission-driven model, removing the barriers to long-term innovation and allows for the pursuit of high-risk, high-reward projects. It will reserve 20 per cent of its funding for blue-sky research and bring together scientists from diverse disciplines.

Importance and benefit of therapeutics in a pandemic response

In addition to public health measures, an effective pandemic response requires both vaccines and therapeutics.

Experience from the HIV and COVID-19 pandemics shows that therapeutics are critically important in the response to a major global pandemic.

New treatment platforms will add an additional layer of protection for the world from future pandemics. Without them, the next pandemic could be an even greater threat to people and society.

The need for fast-track treatments

While the current approach to developing therapeutics has delivered life-saving treatments for viruses such as HIV and more recently, delivered treatments for COVID-19, the strategy of screening libraries of small molecules or designing drugs based on the shape of viral proteins is slow. It can typically take 2-5 years before they are ready for Phase 1 trials.



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In the response to COVID-19, it took two years to develop the world's first COVID-19 oral drug treatments, Paxlovid and Molnupiravir – these were approved in late 2021. These treatments remain expensive and are currently only available in high income countries.

By comparison, the first COVID-19 vaccine was approved in July 2020. If Paxlovid and Molnupiravir, or a similar therapeutic drug, had been available at scale in July 2020, in line with COVID-19 vaccine approval, it could have prevented millions of deaths across the globe.

While we will always need vaccines to effectively manage a pandemic, treatments also play a critically important role for those people who become infected. Treatments that specifically target a virus and stop it replicating can also prevent infections, as has been shown for HIV and other viruses.

Further background

Located in the heart of Melbourne's Biomedical Precinct, the Doherty Institute is led by Professor Sharon Lewin, a global leader in research and clinical management of HIV and infectious diseases. She will be the director of the new CGCPT.

The Doherty Institute is a joint venture between The University of Melbourne and The Royal Melbourne Hospital and is named after Nobel Prize winner Laureate Professor Peter Doherty, who is the patron of the Institute.

When the first COVID-19 cases landed in Melbourne in January 2020, scientists at the Doherty Institute were the first in the world outside of China to grow and share the virus globally. The Institute led a national consortium of mathematical modellers who provided the evidence base for the Australian Government's policy response to COVID.

The Doherty Institute has more than 850 staff who work on infection and immunity through research, education, and public health. Activities include discovery research, diagnosis, surveillance and investigation of infectious disease outbreaks, and the development of ways to prevent, treat and cure infectious diseases.

The Cumming Global Centre for Pandemic Therapeutics will be established within the Doherty Institute's Parkville facility and will form part of the \$650 million Australian Institute for Infectious Disease (AIID), which has been funded by the Victorian Government, the University of Melbourne, Doherty Institute and Burnet Institute, and will open in 2027. Designed to protect Australia and the region against infectious disease and future pandemics, the AIID will focus on multi-disciplinary and collaborative scientific programs supported by access to the state-of-the-art research platforms within the new facility.

Funding model

Establishing a centre for pandemic therapeutics in Melbourne, Australia, has been made possible by an historic \$250 million philanthropic donation to the University of Melbourne by Mr Geoff Cumming.

Mr Cumming's gift to the University of Melbourne is Australia's largest ever philanthropic donation made to medical research and is pivotal to the establishment of the CGCPT within the Doherty Institute – a joint venture with the University of Melbourne and Royal Melbourne Hospital.

In support of Mr Cumming's donation, the Victorian Government is contributing \$75 million to the establishment of the new centre.

The Doherty Institute aims to leverage Mr Cumming's gift with a goal of raising a total of \$1.5 billion over the next 10 years. There are already promising indications of support from the international technology industry and global philanthropic bodies.