Transforming Lung Cancer Research



The Woolcock Centre for Lung Cancer Research is dedicated to beating lung cancer. Its collaborative approach and high-tech facilities promote large translational research programs within the field. Based at the Woolcock Institute of Medical Research and opened in 2018, it is NSW's first specialist lung cancer centre and is transforming the way we research and treat the disease.

Risk factors Are certain individuals predisposed to developing lung cancer? Are we able to Responses to identify lung treatment cancer genes? How can we predict Cause and prevention which patients are What causes lung going to respond the cancer? How can best, and to which we prevent cancer treatments? from starting in the first place? Personalising treatment Early detection How can we How can we detect personalise lung lung cancer early so cancer treatments that people with lung for each individual cancer can be treated patient? as early as possible? New therapeutic approaches How can we more effectively treat lung cancer with fewer adverse effects? What new approaches can lead to a cure?

The Woolcock Institute of Medical Research is a not-for-profit organisation

If you are interested in further information about becoming involved in our research studies or making a donation, please visit our website www.woolcock.org.au.

Your contribution will make a difference.

Thank you for your support.

P 02 9805 3000 **F** 02 9805 3199 **E** info@woolcock.org.au

WOOLCOCK LEADERS IN BREATHING & SLEEP RESEARCH

Centre for

Lung Cancer

Research



The revolutionary Woolcock Centre for Lung Cancer Research, opened in 2018, has created a bright new future for global lung cancer research.

A hub for researchers working in the area of lung cancer, the facility provides tissue, cellular material and patient-related information with a dedicated bio-bank and data centre for research project centralisation. Researchers and collaborators also have access to a state-of-the-art laboratory.

The modern, purpose-built research hub is changing the way this deadly cancer is diagnosed, treated and studied both in Australia and globally.



World-class researchers from some of Australia's best universities and hospitals have come together at the Centre for Lung Cancer Research to form the Lung Cancer Research Network.

The Network, made up of over 20 research teams, forms a multidisciplinary group of basic and applied researchers and clinicians, and will grow even further in coming years.

At this one-of-a kind facility, researchers can share results and innovate faster, advancing the field of lung cancer diagnosis and treatment in ways that have never been seen before.

The Centre's translational approach to understanding, diagnosing and treating lung cancer has made it a leader in the field.

A KILLER DISEASE

Australia's lung cancer facts make grim reading.

- Lung cancer is the fourth most common cancer in Australia and has the highest mortality rate
- More than 10,000 Australians are diagnosed with it each year
- It kills more women than breast cancer
- Unlike breast or prostate cancer, lung cancer has no diagnostic tests for early detection
- It is the leading cause of cancer in the Aboriginal population
- Just 15 percent of those diagnosed with lung cancer are still alive five years later

SOCIAL STIGMA

Despite these alarming statistics, lung cancer carries a stigma that makes it a taboo subject. This is likely due to its links to smoking, even though studies show 35 percent of lung cancers in women are not smoking related.

Associations like the Lung Foundation Australia have initiatives to raise public awareness of the cancer, but there isn't sufficient funding or a concerted effort to develop new diagnostic tools, understand the mechanism behind the disease or find treatments.

With its revolutionary new approach, the Centre will bring lung cancer research and treatment flying into the 21st Century.

THE BIG PICTURE

The Network links researchers with clinicians and healthcare providers across five core areas:

- Patient interface
- Mechanism of disease
- Drug discovery
- Modelling disease/drug evaluation
- Drug delivery and technology

This unique approach allows for a truly translational path to treating lung cancer, since each arm can provide scientific input, material and knowledge that supports research in the other arms. Excitingly, this collaborative environment allows for an almost unlimited number of 'multidisciplinary' projects.

MAKING A DIFFERENCE

Data generated from the Centre's research will flow across the Lung Cancer Research Network, allowing researchers to take their work from "bedside to bench and back again".

We are working to develop non-invasive diagnosis methods and innovative drug delivery, and to build 3D-printed airway stents for patients with breathing difficulties.

We are investigating how to improve the efficacy of lung cancer therapies by exploiting the patient's own microbiome. This cutting-edge project is the first of its kind in Australia and is developing microbiome-based diagnostic tests and interventions that boost the efficacy of lung cancer drugs. This research will lead to the adoption of new and better biotherapeutics for lung cancer patients.

The Centre for Lung Cancer Research will save lives and change the treatment landscape for lung cancer sufferers and their families.