NSW Health Statewide Biobank

Supporting world-class health and medical research

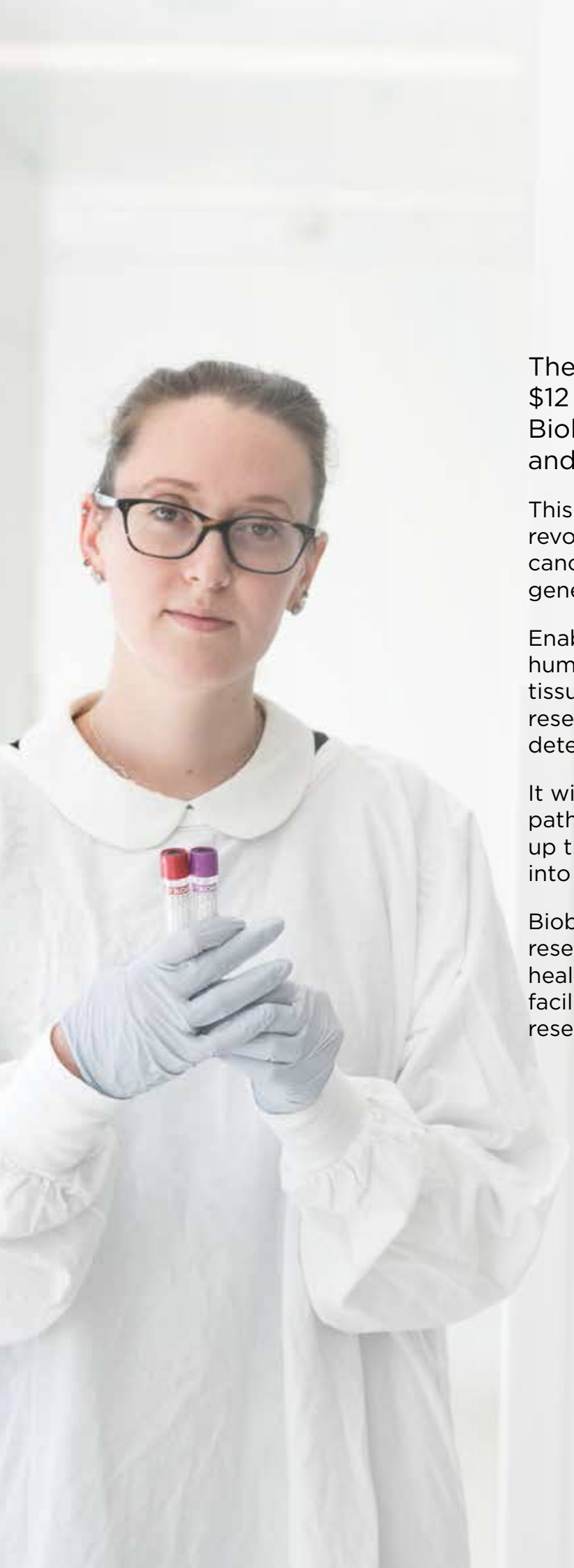
NSW GOVERNMENT Health
Statewide Biobank

“This is a game changer for health and medical research in this state and will help secure our place on the global stage.

High-quality research depends on biobanks and this state-of-the-art facility can store over three million samples for researchers looking to find the cause of illness and treatment for disease.

The NSW Government has invested $12 million in this project, which will help make a difference to the health of our community for generations to come.”

The Hon. Brad Hazzard MP
NSW Minister for Health and
Minister for Medical Research



The NSW Government has invested $12 million in the NSW Health Statewide Biobank to support world-class health and medical research across the state.

This state-of-the-art facility will help revolutionise NSW research efforts into cancer, diabetes, heart disease and rare genetic conditions.

Enabling access to the largest collections of human samples in Australia — DNA, blood, tissue and tumour cells — it will help NSW researchers improve the way disease is detected, diagnosed and treated.

It will support research into providing pathways to better treatments and help speed up the time it takes to translate discoveries into improved patient care.

Biobanks are vital to modern medical research and our evolving knowledge of health and disease. This new statewide facility marks an exciting new era for our researchers and communities.

The NSW Health Statewide Biobank is the first and largest facility of its kind in Australia.

Large-scale robotic technology can store and process over three million human biospecimens.

Highly sophisticated automated equipment reduces the time it takes to manage and retrieve samples.

Strengthening statewide research collaborations

The new, state-of-the-art facility is located in the Professor Marie Bashir Centre at Sydney Local Health District's Royal Prince Alfred Hospital campus, Camperdown.

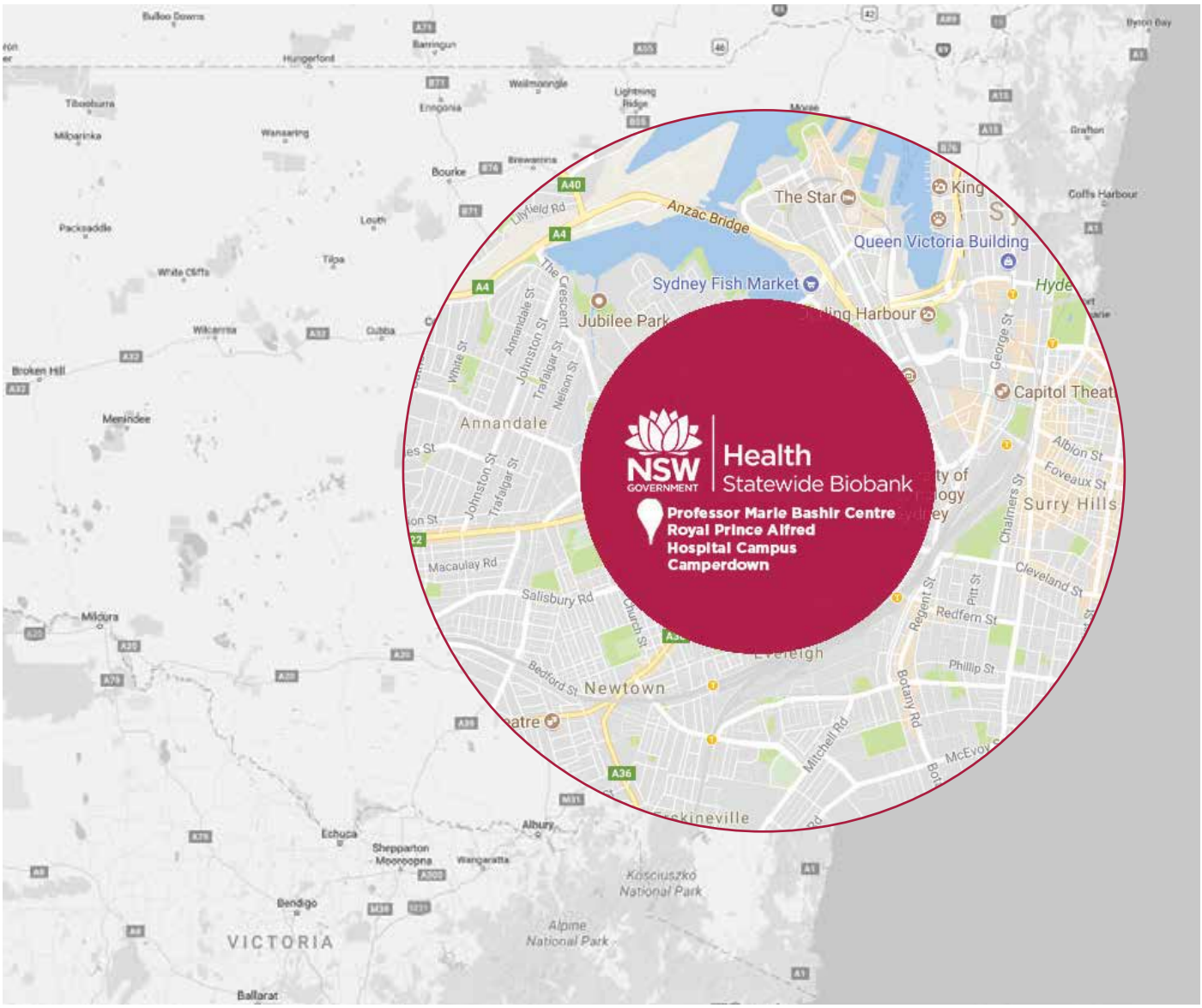
Housed within this renowned health and medical research hub, the biobank will help strengthen research collaborations and networks across the state and beyond.

It provides vital infrastructure to help researchers gain a more in-depth understanding of the health of the NSW community, participate in more international studies and improve the way disease is detected, diagnosed and treated.

NSW researchers can choose to house some or all of their existing collections at the modern biobank.

Samples and collections are housed in line with evidence-based, best practice protocols and operating procedures.

NSW Health Pathology — Australia's largest public pathology provider — is operating the new facility.



A world-class facility for the research community of New South Wales

Quality

State-of-the-art temperature-controlled storage systems protect the long-term integrity of samples used in population- and disease-specific collections.

High-quality standard operating procedures ensure researchers can trust that each sample they receive has been treated according to best practice international biobanking standards.

Quantity

Large-scale robotic technology will be capable of storing over three million samples for medical research, enabling the world-class biobank to support large population studies.

Researchers across the state can store and access a wide range of samples to advance contemporary medical research programs.

Efficiency

Advanced robotic technology reduces the time it takes technicians and researchers to manage and retrieve samples.

Specimens are deposited and retrieved from the cold storage facility through a dedicated processing laboratory, developed in consultation with NSW Health Pathology. This uses streamlined workflows to allow for fast and efficient handling of a variety of samples.

Effectiveness

Links with NSW Health data will be supported to enable follow-up with donors where appropriate consent and ethics approval is available.

Bringing together local health districts, universities, medical research institutes and industry, the modern facility will also help strengthen research collaborations and networks across the state and beyond.

A vital new resource for modern medical research

- Large-scale robotic technology to store and process over three million samples of human tissue, blood, DNA and tumour cells.
- Unique support for large-scale population studies to help track health trends across the state and disease-specific studies, such as cancer, heart disease, dementia, diabetes and rare diseases.
- Highly sophisticated automated equipment reducing the time it takes to manage and retrieve samples, and speed up the time it takes to get discoveries from the lab to patients.
- State-of-the-art, temperature-controlled storage systems to protect the long-term integrity of samples; vital for studies lasting 10 years or more.

Fully automated barcode tracking system to ensure traceability and custody control of samples

Integrated collection across NSW Health Pathology's extensive network of laboratories and collection centres

Shipping of samples to end users in accordance with industry and regulatory standards

Links to other health data sets through the Centre for Health Record Linkage (CHeReL)

Histopathology tissue processing capabilities

Capacity to support large-scale population studies

- Brooks BioStore II automated -80°C storage facility
- Mechanical -80°C freezers
- Reticulated nitrogen to cryovats for -196°C

Blood collection facilities including automated fractionation of blood into its components (plasma, serum, buffy coat, etc.)

World's best practice management systems ensuring biospecimens of the highest quality e.g. ISO 9001:2015

Ultra-low temperature to support long-term storage of samples

Fully automated barcode tracking system for traceability and custody control of samples

Laboratory information management system and automated DNA extraction

Our first statewide biobanking framework

Led by NSW Health Pathology, the new framework will ensure NSW has a world-class, sustainable approach to managing human biobanks and the specimens they house.

It will improve integration between research, diagnostics and clinical care, and help provide a more standardised approach to biobanking.

- New voluntary certification program to improve the quality of biobanking in NSW by sharing education and best practice guidance.
- Standardised consent process with associated policy guidance, developed by NSW Health's Office for Health and Medical Research.
- Statewide Tissue Specimen Locator to improve access to collections across the NSW biobanking community.
- Standardised agreements to support the transfer of human biospecimens between hospitals, biobanks and researchers.
- A data linkage service for the facility that will support follow-up data from NSW Health administrative data to be accessed by collections housed at the statewide biobank. Under development by the Centre for Health Record Linkage (CHeReL).

Supporting world-class research for better patient care

For more information

about the NSW Health Statewide Biobank or the biobanking framework, contact:

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NSW Health Statewide Biobank is a flagship facility of NSW Health developed in partnership with the Office for Health and Medical Research, NSW Health Pathology, Sydney Local Health District and Health Infrastructure.

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