

# Realising the full potential of immunotherapy in eradicating cancer

## The challenge and opportunity

The last decade has seen significant progress in understanding how the immune system can help to control cancer, resulting in immunotherapies – treatments which use the patient’s own immune system to target cancer.

Despite currently only benefiting 30% of patients with advanced lymphoma, kidney, bladder and lung cancer, patients who do benefit from immunotherapy experience longer progression free survival and do not experience the negative side effects of typical treatments, such as chronic pain and fatigue. To harness the potential of immunotherapy, and extend its benefits to treat all cancer types, further pioneering research is needed.

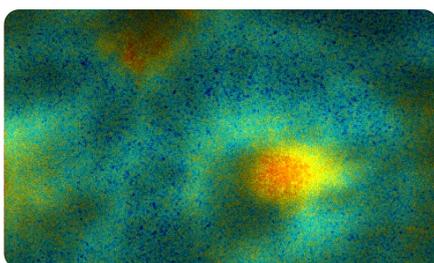


“By looking in the ‘dark space’ deep inside tumours, we hope to finally answer questions that we have not been able to answer before, revealing crucial insights that will allow us to develop new therapeutic approaches for eradicating cancer in all patients.”

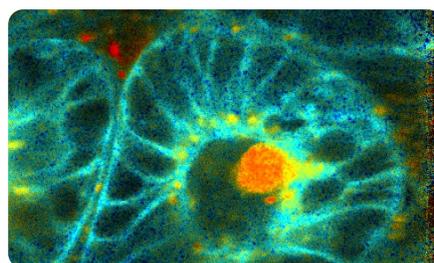
Professor Tri Phan,  
 Chief Investigator

## Project in brief

- The ACRF Centre for Intravital Imaging of Niches for Cancer Immune Therapy (INCITe) will house two Australian-designed, custom-built microscopes that will allow researchers to see immune cells and molecules at the cancer site and how they interact in real time – below the surface of tumours and deep inside tissues.
- Insights from the ACRF Centre for INCITe will be used to inform the development of targeted immunotherapy that will benefit a larger number of cancer patients across more cancer types.
- ACRF INCITe will be based at the Garvan Institute of Medical Research in Sydney, NSW.



Current vision of tumour cell using traditional imaging technology



Improved vision of tumour cell using NICHEscopes

Borrowing ideas from astronomy and engineering these world-first microscopes will allow scientists to look deeper and in real-time at tumour cells. With this new technology possibilities for advancing our research are infinite.

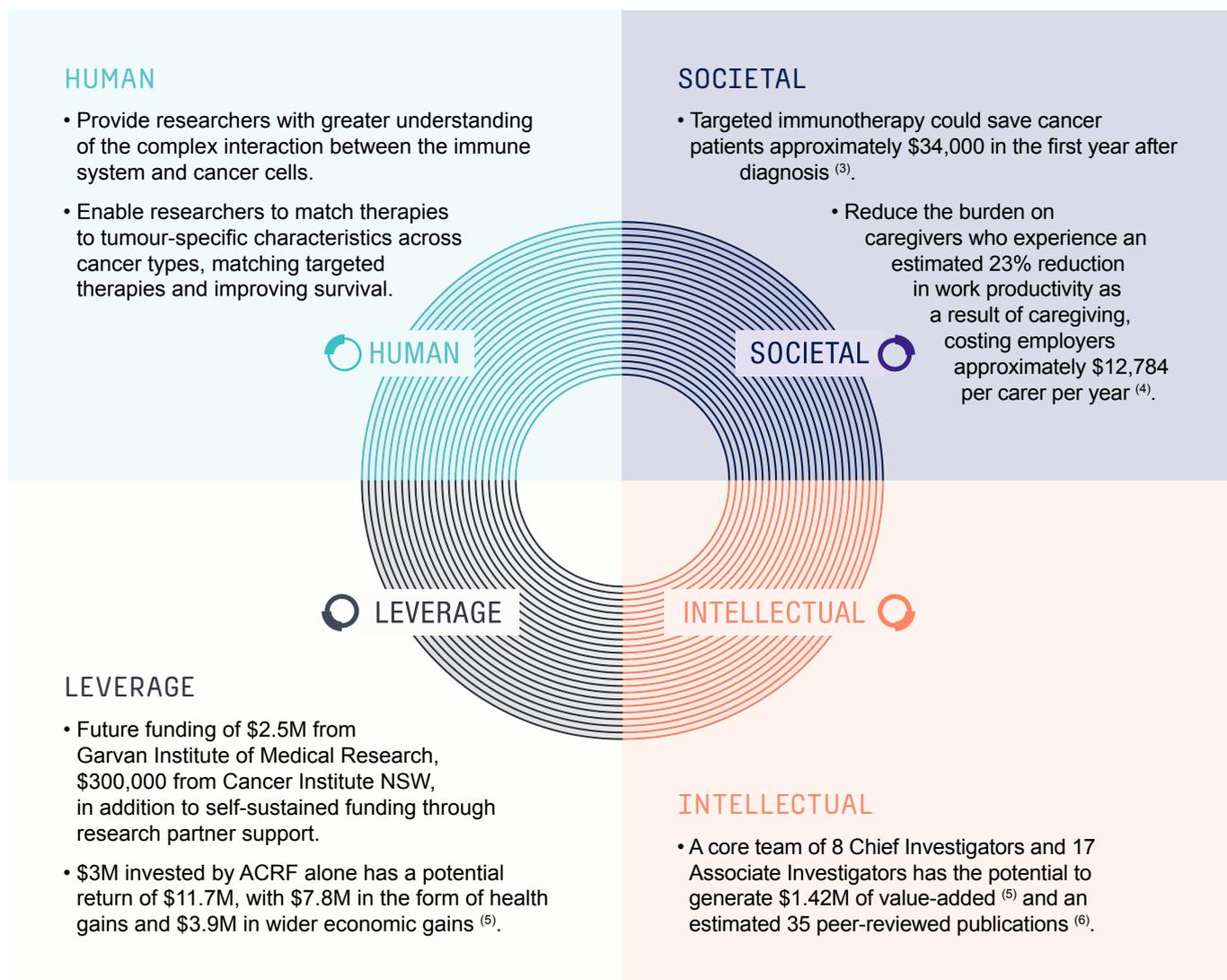
## Project costs

The \$3M grant funded by ACRF will be used to purchase and construct:

- Two NICHE scopes to analyse tumour cells in enhanced detail (\$2,800,000).
- A virtual lab for researchers from around Australia to access the microscope technology (\$200,000).

## ACRF Impact Model

With input from health economics specialists, ACRF has developed a framework to articulate the anticipated future impact of projects that receive ACRF funding. Below is an overview of the outcomes the ACRF Centre for INCiTe has the potential to achieve:



For references, please visit [acrf.com.au/philanthropy-accelerate-references](http://acrf.com.au/philanthropy-accelerate-references)

### Contact information

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