

4 August 2023

## **Award to fund innovative CAR-T cell therapy research**

Dr Mehdi Sharifi Tabar, a researcher from the Gene and Stem Cell Therapy Program at the Centenary Institute, has been announced as the recipient of the 2023 Kenyon Foundation Inflammation Award.

The \$20,000 award will support Dr Tabar's research into enhancing the effectiveness of CAR-T cell therapy, an innovative cancer treatment that involves modifying a patient's own immune cells into CAR-T cells to target and destroy cancer.

While CAR-T cell therapy has shown remarkable success in treating blood cancers, its ability in combating solid tumours is limited.

"We have successfully treated towards one hundred patients with blood cancers using CAR-T cells at the Royal Prince Alfred Hospital but they still haven't been shown to work for more common cancers," observed Professor John Rasko AO, who is Head of the Gene and Stem Cell Therapy Program.

One of the major challenges faced by CAR-T cell therapy is CAR-T cell exhaustion, a phenomenon in which the modified immune cells lose their cancer-fighting ability over time due to prolonged exposure to tumour cells.

Dr Tabar's research will concentrate on a specific gene that regulates the production of signalling molecules (inflammatory cytokines), which can lead to CAR-T cell exhaustion. By modifying this gene, the goal is to decrease the rate of CAR-T cell exhaustion and improve the tumour-killing potential of CAR-T cells.

"CAR-T cells produce signalling molecules in response to cancer cells. They help to activate other immune cells and enhance the anti-cancer immune response," explained Dr Tabar.

"However, the excessive release of these signalling molecules can cause CAR-T cells to over-activate leading to CAR-T cell exhaustion, which can limit the efficacy of CAR-T cell therapy. By genetically 'turning down' the production of these signalling molecules, we may be able to reduce exhaustion levels and ultimately improve cancer treatment outcomes for patients."

Pancreatic cancer models will be used by Dr Tabar to test the approach with the insights gained likely to improve the understanding and effectiveness of CAR-T cell therapy in a broader cancer context.

"I'm extremely grateful for the Kenyon Foundation's support," said Dr Tabar.

"The funding will allow me to undertake research that has the potential to overcome the challenge of CAR-T cell exhaustion and unlock the full potential of this exciting cancer treatment."

Trustee of the Kenyon Foundation, David Kenyon, expressed his enthusiasm for the innovative research.

“The Foundation is delighted to continue its support of, and investment in, the careers of outstanding researchers such as Dr Tabar, to improve our understanding of human health and ultimately provide better outcomes for the community,” said Mr Kenyon.

“Dr. Tabar's important research has the potential to advance the knowledge and application of CAR-T cell therapy and to improve the lives of those affected by cancer, a truly devastating disease.”

[ENDS]

**Images:**

Dr Mehdi Sharifi Tabar

<https://drive.google.com/file/d/16V7Pw2hNMKiL2jom3GEYECdgB368U3nn/view?usp=sharing>

**For all media and interview enquiries, please contact**

Tony Crawshaw, Media and Communications Manager, Centenary Institute on 0402 770 403 or email: [t.crawshaw@centenary.org.au](mailto:t.crawshaw@centenary.org.au)

**About the Centenary Institute**

The Centenary Institute is a world-leading independent medical research institute, closely affiliated to the University of Sydney and the Royal Prince Alfred Hospital. Our research focuses on three key areas: cancer, inflammation and cardiovascular disease. Our strength lies in uncovering disease mechanisms and applying this knowledge to improve diagnostics and treatments for patients.

**For more information about the Centenary Institute, visit [centenary.org.au](http://centenary.org.au)**

**About the Kenyon Foundation**

The Kenyon Foundation is a Canberra based philanthropic fund established in 2016 by the children of the late Helen and the late Arthur Kenyon AM. The Kenyon family are long term residents of Canberra with Helen and Arthur bringing their young family to the National Capital in 1960. Helen and Arthur welcomed the opportunities that came with their new home city and they both contributed significantly to Canberra's social, commercial and charitable activities. The creation of the Kenyon Foundation by Helen and Arthur's children, sons David and Richard and daughter Louise, honours the hard work, aspirations and vision of their parents. The Kenyon Foundation provides financial support and encouragement to its community, in Canberra and beyond, through annual gifting programs and donations, particularly in the areas of education, sporting groups, cultural organisations, medical research and bodies assisting the disadvantaged, disabled and homeless.