

# New treatment has researchers excited

# Budding ideas help

# to grow cancer hope

Robyn Riley

An emerging blood cancer treatment that holds the potential of a cure has Victorian researchers elated and baffled.

CAR T-cell therapy – Chimeric Antigen Receptor – is, says Peter MacCallum Cancer Centre researcher Ilija Voskoboinik, an exciting immunotherapy. It uses a patient's own immune system to seek out and destroy cancer cells.

Budding pediatric doctor Rosemary Talbot, 12, has high hopes this immunotherapy can cure cancer.

She wrote to Cancer Council Victoria recently to suggest a tiny robot could be programmed to tell the difference between a non-cancerous cell and a cancerous cell and then deliver a killer blow.

Rosemary was, says Cancer Council Victoria, describing the role of immunotherapies like CAR T-cells.

Associate Professor Voskoboinik, who met with Rosemary to talk about the science behind it, says while it works well in some blood cancer patients, in others CAR T-cell therapies are less effective.

He is investigating why some patients' immune system responds to the treatment too much, sending it into overdrive, which can cause a potentially serious side effect called Cytokine Release Syndrome (CRS).

Associate Professor Voskoboinik is leading a team at the Peter Mac working to develop personalised therapies that overcome blood cancer resistance, predict those patients where CAR T-cell therapy will be ineffective and modify treatment so that there are fewer side effects.

The groundbreaking research is partially funded by Cancer Council Victoria.

The team, which also includes Peter Mac Professor Joseph Trapani and Professor Constantine Tam at Alfred Health, has already found different levels of resistance of cancer cells to CAR T-cells.

"By conducting this research



Rosemary Talbot has high hopes this immunotherapy can help cure cancer; and (inset) the letter she wrote. Picture: Wayne Taylor

we can identify whether a patient's blood cancer cells can be killed by CAR-T cells and, if not, we may try and arm them so they can defeat cancer," Professor Voskoboinik said. "We are looking for the missing pieces of the puzzle."

The goal, he said, was to generate CAR T-cells that will have minimal side effects without compromising their capacity to kill cancer cells.

"If we get there I will be very happy," he said.

Professor Voskoboinik said the team has "gone back to basics" to better understand how this immunotherapy works in blood cancers.

"For many patients with hard-to-treat blood cancers, and who have relapsed or not responded to earlier treatments, CAR T-cell therapy can lead to prolonged remission and be an effective cure," he said.

"However, for a subset of these patients that we cannot

yet predict, CAR T-cell therapy will be ineffective – and we don't fully know why.

"The way it works it was expected that these CAR T-cells that recognise a very specific molecule on the surface of blood cells would work uniformly well for every blood cancer, but it doesn't. That's what we need to work out."

He added that without funding from Cancer Council Victoria the project wouldn't have achieved key milestones.

Cancer Council Victoria's CEO Todd Harper said Cancer Council and its research partners had invested more than \$290 million in cancer research, making it the largest independent funder of cancer research in the country.

**To help its work, support Daffodil Day today by donating or buying daffodils at [daffodilday.com.au](http://daffodilday.com.au) or phone 1300 65 65 85, or host a fundraiser.**

## Tradie 'hanged' a junior

Timothy Cox

A Ballarat tradie made a noose out of tape and bound the feet of an apprentice who was then subjected to a mock lynching.

Liam Loftus, a 26-year-old plumber from Newington, was one of three men accused of bullying a teenage apprentice while employed at Celsius Heating and Cooling.

He appeared in Ballarat Magistrates' Court on Wednesday, where it was heard that on February 15, 2023, Loftus, was working with two co-accused and the apprentice.

About 11am, they were installing ducts in the property's roof. Loftus bound the apprentice's feet and fashioned a noose out of tape.

The teenager was then enticed to put his head in the noose, and did so "feeling peer pressure".

Loftus and another man lifted the apprentice's feet off the ground, causing pressure to be applied to his neck, which he felt for two seconds.

The ordeal was reported to police the next day.

Loftus pleaded guilty to reckless conduct. He was placed on an undertaking of good behaviour for a year and ordered to make a \$1000 donation to the court fund.

He was not convicted. Following the court decision, the apprentice's mother said she was "disappointed" and felt a more serious punishment, including a conviction, was warranted.

## Struggle for new fathers

First-time fathers should expect changes that temporarily lower their relationship satisfaction but, if they choose to have another child, the changes will be easier to weather a second time, according to international researchers.

The team surveyed 500 first-time fathers and 106 fathers expecting their second child between 2017 and 2020, checking at regular intervals.

First-time dads showed a higher level of relationship satisfaction just before their first child, then a steeper decline in satisfaction after their kid's birth that continued until 14 months post-partum.

## A clever little penguin

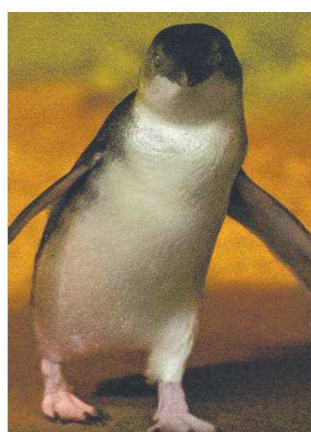
Little penguins might look cute but it seems no prey is safe from them.

Penguin-cam footage reveals they catch fish sheltering underneath jellyfish, while grabbing dead fish trapped in their tentacles.

The footage, taken from cameras strapped to 32 penguins living in two colonies in Bass Strait, shows the penguins eating

seven main prey types, including bellowsfish and other fish species captured sheltering around jellyfish or extracted dead from the tentacles.

These techniques, observed for the first time, provide important insights into the feeding behaviours of little penguins and may be used to monitor how the species adapts to the threats of climate change.



Little penguins are great hunters.

## Cannabis investigation widens

Athos Sirianos

An Italian national living in Melbourne's north has become the latest person to be charged as part of a police investigation into an alleged Albanian organised-crime syndicate trafficking drugs.

Police seized cannabis, cash and cannabis cultivation equipment at a \$1m Sunbury property on Tuesday, and arrested a 42-year-old man. He was

charged with possessing cannabis and proceeds of crime and was bailed to appear in court early next year.

The arrest came after several in Melbourne's north as part of an investigation into an alleged Albanian crime syndicate.

A Taylors Hill man, 47, and a Deer Park woman, 44, were charged with cultivating and trafficking a commercial quantity of cannabis. They are set to appear in court in January.

Last week police seized more than \$5m worth of cannabis from properties in Taylors Hill, Deer Park, Rockbank and Greenvale, as well as \$200,000 in cash from the Taylors Hill property.

Anyone with information about organised criminal or illicit drug activity is urged to contact Crime Stoppers on 1800 333 000 or make a confidential report at [www.crimestoppersvic.com.au](http://www.crimestoppersvic.com.au)