



MAY 2022 • ISSUE 17

living insights

Published on an occasional basis, *Living Insights* is a source of up-to-date information for followers of the Australasian biotechnology company Living Cell Technologies (LCT)



Message from the Executive Chairman

Welcome to this issue of Living Insights.

It has been nearly two years since our last issue of this newsletter and a lot has changed, both at LCT and globally.

In August 2020, barely a month after the last "Living Insights" newsletter, our founder, Emeritus Professor Sir Robert (Bob) Elliot, sadly passed away aged 86.

Sir Bob has been described as New Zealand's greatest child health researcher. He left a lasting legacy, not only at LCT but also for the broader global health community.

In July 2021, I took the reins as Interim CEO following the retirement of former CEO, Dr Ken Taylor.

In October 2021, LCT successfully secured funding for a third clinical trial of NTCELL, and that is now our focus as we work to advance this potentially breakthrough treatment.

Importantly, experienced medical researcher Dr Belinda Di Bartolo joined us last December as Chief Operating Officer, charged with

overseeing the NTCELL trial (refer profile).

This year has seen further advances regarding NTCELL, with the signing of a service agreement with New Zealand biotech NZeno to obtain tissue from pathogen-free pigs. This was recently followed by a research agreement with University of Technology Sydney to produce NTCELL in Australia for the first time, an important step.

LCT has also made efforts to enhance our engagement with investors, as seen with our recent webinar and presentation. More such events are planned to ensure our shareholders are kept fully informed on the status of our exciting research.

While geopolitical and economic issues have dominated the headlines in 2022, at LCT we are concerned with events that we can control, namely our project activities.

With the necessary funding secured, a new COO onboard and key agreements in place, I believe we are well placed to make further advances in 2022 for the benefit of shareholders and the global community, including people with Parkinson's disease.

Professor Bernie Tuch
Executive Chairman/Interim CEO



MEET THE TEAM: Dr Belinda Di Bartolo, COO

Appointed LCT's Chief Operating Officer (COO) in December 2021, Dr Di Bartolo has 18 years' experience in health and medical research.

In this Q&A we asked Belinda about her background in science and research and why she was attracted to LCT.

What attracted you to a career in science?

As a child I watched many of my family members live with chronic disease. My grandfather lived with diabetes for my entire life and when I went to university I wanted to focus my attention on medical science in order to explore my interest further.

I found that I loved discovery science. Understanding fundamental biology fascinated me, particularly in human disease. I had so many questions: What drives human disease? Why do our bodies malfunction, what are the causes and more importantly how can we stop it, treat it or reverse it? These questions drove my scientific curiosity and brought me to a career in medical research.

Can you give us some background on your medical research career?

I graduated from The University of Sydney with a Bachelor of Medical Science (Hons) in 2002 and completed a PhD in Medicine at the Heart Research Institute (HRI) in 2009, specialising in vascular

and lipid biology. I remained in Sydney during most of my postdoctoral career, starting at the University of New South Wales and then returning to the HRI.

With a desire to undertake independent research, I was given a fantastic opportunity by my old PhD supervisor and mentor to join him in at the South Australian Health and Medical Research Institute (SAHMRI) in Adelaide. This position granted me an amazing opportunity to lead a team in research that I was passionate about.

I returned home to Sydney in 2019 to lead a translational program within a larger group at the Kolling Institute.

What attracted you to join LCT?

I was really interested in the projects LCT had embarked upon in the past and thought that this company was working in spaces I could really relate to. I feel like I have a passion for the type of medical research that LCT is interested in and that made for a really great fit.

Parkinson's disease is an untapped market with regards to long-term, effective therapies.

What do you see as LCT's competitive advantages?

Coming from a field of cardiovascular disease that has advanced in its development of drugs and therapies to treat it, I was surprised to learn that

Parkinson's disease is an untapped market with regards to long-term, effective therapies. LCT's NTCELL program fills this gap and highlights its potential as a leader in the field.

In 2022 and beyond LCT has the chance to not only progress its NTCELL project, but also work with other companies and researchers to develop more therapies for chronic disease.

Who inspires you in your scientific career?

I am inspired by so many of the great researchers who have paved the way for the continuation of discovery research. Most notably, Nobel prize winner Elizabeth Blackburn has always been a source of inspiration for the pursuit of good science.

I also find that I am inspired by my students. The ability to pass on knowledge and mentor the next generation of scientists is such a privilege.

Closer to home, my scientific career has been inspired by a great friend and mentor, Professor Stephen Nicholls. He gave me my start as a research assistant, saw me through my

PhD and gave me the opportunity to be an independent researcher. I always admire his enthusiasm and ability to be both a dedicated clinician and scientist and love that he is a fierce champion for women in science.



MEET OUR PARTNERS:
Paul Tan, CEO, NZeno



In January 2022, LCT signed a Service Agreement with New Zealand biotech NZeno, under which NZeno will breed and maintain pigs to provide tissue for LCT's third clinical trial of NTCELL in Parkinson's disease. NZeno maintains the only herd derived from designated pathogen-free pigs found on New Zealand's sub-Antarctic Auckland Islands.

We spoke to NZeno CEO, Paul Tan about the agreement with LCT and its outlook.

Can you give some background on NZeno and your operations.

NZeno is a biotech company based in New Zealand with ethically bred medical grade pigs. These pigs were derived originally from the Sub-Antarctic Auckland Islands, but were subsequently selected and

now cared for at NZeno's facility. NZeno supplies medical grade pig tissue. In addition, we are developing our own lead target focusing on gene-edited pig kidneys for people whose kidneys no longer function to maintain life.

There is a chronic shortage of human kidney donors worldwide and this gene editing is necessary to make pig organs more compatible for human transplantation. We are very encouraged by reports of recent transplants of gene-edited pig kidneys into brain-dead patients without acute rejection by the human immune system.

What makes Auckland Islands pigs so suitable for research such as LCT's?

Pigs from the Auckland Islands were isolated for about 200 years and so remained free of common pig infections. Since their arrival in New Zealand, they have been maintained in a Designated Pathogen Free (DPF) environment.

More importantly, LCT has previously conducted human clinical studies in

Type 1 diabetes and Parkinson's disease. As source animals of porcine cells for treating human disease they have a unique safety record. Patients treated with cells from this strain of pigs have not shown any evidence of transmission of potential infections from pigs to humans.

How is the project with LCT progressing?

We are off to a great start with Dr Belinda Di Bartolo, with regular communication between us.

Belinda has absorbed a huge amount of information concerning past data on the pigs, manufacturing, sourcing of materials, clinical trial data, the regulatory process and staff training.

The pigs have been mated so that tissue for LCT's research will soon be available, while we are also upgrading our facility to set aside pigs for LCT.

The first target is to get tissue supplied to the Sydney laboratory as soon as it is set up to receive pig tissue from New Zealand. The next significant milestone has to be a functional manufacturing team and laboratory, that then receives GMP [Good Manufacturing Practice] status for the facility and for NTCELL.

New Zealand has a long and proud history in animal research, what are some of the reasons for this?

New Zealand and Australia are unique in being free of common animal infections found in other parts of the world, all thanks to a biosecurity

policy that seems draconian to some international visitors.

Importantly, our biosecurity laws ensure that we have pigs free of common infections.

New Zealand has a high standard of animal husbandry. It is very important to stress that our facilities are operated under the oversight of an Animal Ethics Committee. Pigs are sentient beings and they must be given the care that they deserve.

With regard to xenotransplantation, the New Zealand government conducted a nationwide survey and the Bioethics Council released a 2005 report concluding that most New Zealanders were in favour of continuing with using pig tissue for human health under a regulated system. This allowed LCT to conduct the first trials under the new international regulations.

Upcoming investor key dates

29 July: June quarterly report due

Q3 2022: NTCELL – confirmation of manufacture in non-GMP facility

31 October: Annual Report, September quarterly report due

Q4 2022: NTCELL – GMP manufacturing commences

Note: Timing expectations are based on current best estimates and may be subject to change.

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