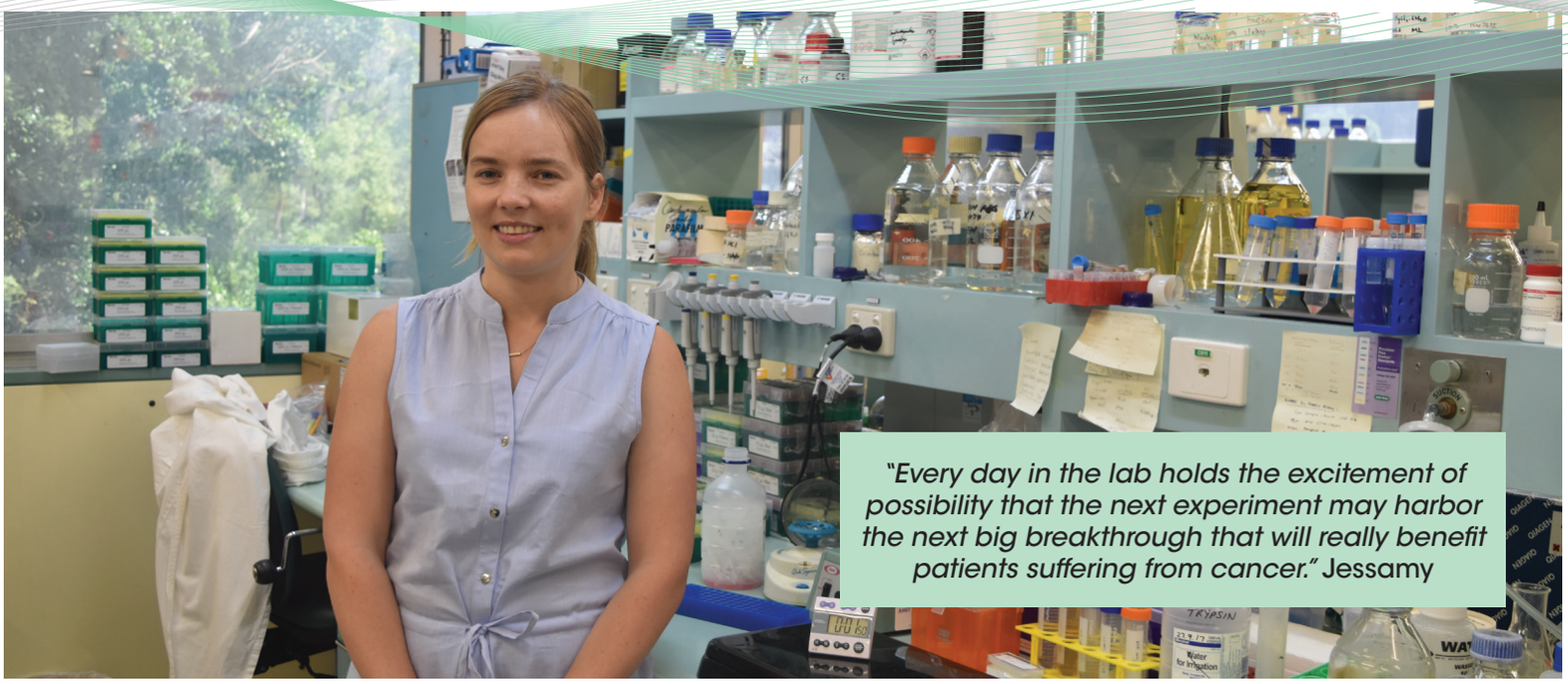
DR JESSAMY TIFFEN

Centenary Institute life saving research
Cancer. Inflammation. Cardiovascular.



"Every day in the lab holds the excitement of possibility that the next experiment may harbor the next big breakthrough that will really benefit patients suffering from cancer." Jessamy

More than 15 Australians will be diagnosed with cancer every hour this year.[1]

I inherited a curiosity for science from my grandfather who was a microbiologist – he worked on a charming disease known as 'foot rot'. I remember so well my graduation – my grandfather was so proud of me he cried. I feel very lucky to have someone in my family who understands what I do every day and I would like to share what I do with you, someone who has shown that you too care about what I do every day.

My career commenced at Centenary as a Research Assistant in 2005, I spent a year in Cambridge in the United Kingdom, before returning to Australia and eventually back to Centenary in 2015. I am a member of the Melanoma Immunology and Oncology Program under Professor Peter Hersey and our team's focus is on translational research with a particular emphasis on melanoma with the aim to better understand the resistance of certain melanoma to treatments options currently available to patients.

My research is centred on fundamental cell biology – looking at what goes wrong in a normal cell and what makes it cancer – what makes some cancer cells respond to treatment and others not.

This year, it is estimated that 138,321 new cases of cancer will be diagnosed in Australia and almost 50,000 Australians will lose their lives to cancer.[1] I know you agree that these are truly alarming and frightening figures and that they are not only statistics but also represent human lives, families and communities.

Currently, of the 70 per cent of Melanoma patients who respond to treatment approximately 40 per cent of them relapse from the disease by two years.

Just why one person with Melanoma or other types of cancer respond to a treatment and another individual with the same diagnosis and given the same treatment does not is the question I am trying to answer.

A cancer diagnosis is devastating for any individual of any age, but to know that Melanoma is the most common cancer in young Australians (15–39 year olds) making up 20% of all their cancer cases and is responsible for more young Australians (20-39 year olds) dying than any other single cancer is motivation for me to find answers.[2]

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This year I will continue to examine the role of a gene suppressor complex in the progression of melanoma and in the suppression of immune responses as well as examining why some patients develop severe auto immune side effects during immunotherapy and how treatment of these can be improved.

My goal is that we will gain sufficient knowledge and understanding of the reasons why certain cells mutate, change and respond the way they do that we will be able to predict which patients may benefit from which treatments. Ultimately, we aim to provide highly targeted, more personalised treatment with greater outcomes for patients. We also aim to research causes and treatment of auto immune side effects which can occur during treatment, to make this treatment safer.

Recent news articles published by the Sydney Morning Herald headlined that - by 2040, nearly two million Australians will have been diagnosed with cancer[3] and another reported that the lifetime cost for each young Australian diagnosed with cancer is $1.3 million.[4]

State-of-the-art equipment has accelerated the way in which we carry out our research - it enables us to gather, store and analyse so much more than ever before. This, coupled with our growing understanding of the roles and significance of epigenetics, genome sequencing and genetic profiling to our research findings will increase our capacity for improved early diagnosis of cancers and contribute to personalised precision medicine which will benefit our nation's long term health outcomes.

I am a mum to a 16-month-old little girl. I still talk science around the dinner table with my grandfather and now my young daughter sits with us – you just never know – she could be a third generation scientist! I can see a future where we are walking around with our genetic blue print on a USB – will this be in her generation!

I have always been driven to unravel the things we do not know and to find answers to so many questions that are unknown – now I am compelled to contribute to changing our future so that my children and grandchildren will have a chance at a future free of disease.

Please help Centenary continue in its quest to reduce the incidence of, mortality from, and impact of cancer on the Australian population through our research endeavours.

Kind regards

Dr Jessamy Tiffen
Melanoma Immunology and Oncology Program

[1]https://canceraustralia.gov.au/affected-cancer/what-cancer/cancer-australia-statistics
[2]https://www.melanoma.org.au/understanding-melanoma/melanoma-facts-and-statistics/
[3]http://www.smh.com.au/national/health/by-2040-nearly-2-million-australians-will-have-been-diagnosed-with-cancer-20180130-h0qydd.html
[4] http://www.smh.com.au/national/13-million-the-lifetime-cost-of-each-young-australian-diagnosed-with-cancer-revealed-20180129-h0pvr6.html