News Release

Embargoed 6pm AEDT, Thursday 10 October 2019

$2.5 million CSL Centenary Fellowships announced:

Curing the 'hidden malaria' in Asia/Pacific (Darwin)

A path to personalised treatment for most cancers (Adelaide)

- **Photos and HD footage available**
- **Full media kit: scienceinpublic.com.au/csl/2020fellows – call us for password**

Two Australian scientists have each been awarded AUD$1.25 million CSL Centenary Fellowships over five years to improve treatments for two of the world's biggest health challenges: malaria and cancer. The Fellowships will be presented in Perth at the Australian Academy for Health and Medical Research Gala Dinner on 10 October.

Dr Kamala Thriemer and **Associate Professor Daniel Thomas** will be funded through the $25 million CSL Centenary Fellowships program, which was established in 2016 to foster excellence in medical research by supporting mid-career Australian scientists to pursue world-class research.

Kamala Thriemer has led large clinical trials in malaria-affected countries to tackle vivax malaria, which infects 14 million people every year. The parasite can hide in the liver and re-emerge months later. Her studies have shown that as few as one in ten patients successfully complete the long course of treatment.

She will use her $1.25 million CSL Centenary Fellowship to develop and optimise treatment programs against vivax malaria in SE Asia and the Horn of Africa. She is confident that vivax malaria can be controlled using the suite of drugs currently available.

Dr Thriemer is a public health researcher at the Menzies School of Health Research in Darwin.

Daniel Thomas has developed new ways to identify a cancer's weakness and target it with personalised treatment. Later this year he will start treating patients with blood cancer including acute myeloid leukaemia.

The CSL Centenary Fellowship will facilitate his return from Stanford University, California to the South Australian Health and Medical Research Institute (SAHMRI) and the University of Adelaide.

"One of the greatest discoveries we've made over the past couple of years is the realisation that cancer cells are not as smart as we thought," Daniel says. "There are limits to what they can do."

CSL Chief Scientific Officer Professor Andrew Cuthbertson said that Dr Thriemer and Dr Thomas both work in fields of global significance.

"These projects add to Australia's international reputation for strong research with significant translational potential and global application," he said.

"The CSL Centenary Fellowships aim to provide funding stability for leading Australian researchers through high-value, long-term support. We are proud to support this research and are excited by the benefits of these projects – not the least of which will be a new generation of young researchers inspired and mentored by Kamala and Daniel."

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Photo & Interview opportunity: Dr Thriemer and Dr Thomas will be presented with their CSL Centenary Fellowships at the Australian Academy for Health and Medical Research Gala Dinner on 10 October.

Full media kit: scienceinpublic.com.au/csl/2020fellows – call us for the password

About the CSL Centenary Fellowships

The Fellowships are competitively selected, high value grants available to mid-career Australians who wish to continue a career in medical research in Australia. They were established to mark 100 years since the establishment of CSL in 1916. Two individual, five-year, AUD$1.25 million fellowships are awarded each calendar year. www.cslfellowships.com.au.

About CSL

CSL (ASX:CSL) is a leading global biotechnology company with a dynamic portfolio of life-saving medicines, including those that treat haemophilia and immune deficiencies, as well as vaccines to prevent influenza. Since our start in 1916, we have been driven by our promise to save lives using the latest technologies. Today, CSL — including our two businesses, CSL Behring and Seqirus - provides life-saving products to more than 70 countries and employs 25,000 people. Our unique combination of commercial strength, R&D focus and operational excellence enables us to identify, develop and deliver innovations so our patients can live life to the fullest. www.csl.com

Curing the “hidden” malaria

Dr Kamala Thriemer, Darwin

Dr Kamala Thriemer will use her $1.25 million CSL Centenary Fellowship to develop and optimise treatment programs against vivax malaria in SE Asia and the Horn of Africa.

Vivax malaria is the second largest cause of malaria deaths and is hard to treat as the parasite can hide in the liver and re-emerge months later. Her studies have shown that as few as one in ten patients successfully complete the long course of treatment.

Kamala is a public health researcher at the Menzies School of Health Research in Darwin.

The Plasmodium vivax strain of malaria represents a challenging foe and is responsible for more than 14 million cases of infection every year, many of them fatal, yet receives little attention.

Developing public health policy to combat P. vivax across its global range is Kamala’s primary focus. A graduate of the Medical University Vienna (MUV), she has led large clinical trials in malaria-endemic countries including Ethiopia, Bangladesh, Indonesia and Vietnam. She lived and worked in the field in Asia and Africa for six years, focusing on malaria, typhoid and cholera.

P. vivax is hard to tackle because after the initial attack, it can hide in the liver and reappear weeks, even months later. A long period of treatment is required which patients often don’t complete, so they get sick again.

“We found that in Indonesia for example only ten per cent of patients successfully completed the treatment,” says Kamala.

Her research reveals that public health strategies to improve treatment outcomes must align with the geographic and economic conditions in any given nation. The five-year CSL Centenary Fellowship will enable her to generate country-specific roadmaps to guide public health programs.

It will also assist Darwin’s growing reputation as a key location for tropical health research. “Darwin is a tropical city, located much closer to Jakarta than Melbourne,” Kamala says. “That makes it a perfect home for tropical health research.”

A path to personalised treatment for most cancers

Associate Professor Daniel Thomas, Adelaide

Dan Thomas has developed new ways to identify a cancer's weakness and target it with personalised treatment. He's already treating acute myeloid leukaemia patients in Adelaide.

His $1.25 million CSL Centenary Fellowship will facilitate his return from Stanford University to the South Australian Health and Medical Research Institute (SAHMRI) and The University of Adelaide.

Daniel began his academic career with a PhD in haematology from the University of Adelaide.

From there he moved to the US and took up a fellowship at Stanford University, California. As a member of the Stanford Alliance for Innovative Medicines (AIM), he succeeded in pinpointing several targets for cancer medications. These included four mutation-specific locations for acute myeloid leukaemia and the prediction of 145,891 synthetic partners for 3,120 recurrent mutations for 12 cancer types.

"The CSL Fellowship will facilitate a full-time faculty position at SAHMRI," he explains.

"I can now concentrate on basic and translational research, and hire a research assistant, without requiring private practice to supplement my family's income.

He will maintain his focus on acute myeloid leukaemia as a testbed because it is "stable and predictable". "Anything we can achieve in one patient, probably we can achieve it in the next," he says.

"One of the great discoveries we made at Stanford was that cancer cells cannot cope with two challenges at the same time. There are limits to their evolution.

"If you can match a specific pathway with a specific mutation in a specific patient, then you can stop its growth and you might also be able to cure."

"My dream is to be able to look at each patient's genome, sequence the cancer, and then put them on a series of non-toxic drugs, maybe even change their diet slightly, and have the cancer cured."

During his tenure at SAHMRI, Associate Professor Thomas will remain a visiting scholar at Stanford, affiliated with the leukaemia-specialist Majeti lab within the university's Division of Haematology, and at the Stanford Cancer Institute.