

2019

HEALTH+MEDICAL RESEARCH

Medical Devices Fund



Office for Health and Medical Research

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A message from the Minister

The NSW Government recognises that investing in health and medical research is essential to the ongoing improvement of the NSW health system. It is integral to the delivery of better treatments and interventions for patients, improving health services delivery and cultivating health outcomes at both the clinical and population level.

The accomplishments and achievements of past recipients attests the success of the Medical Devices Fund. Saluda Medical received a grant in the inaugural round of the Fund for a closed loop spinal cord stimulation system. Since receiving the grant, the company has raised \$319 million in private funding, treated over 200 patients during their clinical trials and has recently received their CE mark. The company is currently pursuing FDA approval and beginning a controlled market release in Europe. Saluda Medical has also grown significantly with staff numbers increasing from 19 to 123, with operations in Australia, the US and Europe.

Another great success is Sound Scouts who received a grant in the third round for their clinically validated mobile game which screens children's hearing to detect



and identify a range of hearing issues. The company has since received a \$4 million grant from the Federal Government to roll out the game nationally and provide free hearing tests for all Australian children between 4-17 years old. Sound Scouts is currently the only tool of its kind available in Australia validated by the National Acoustic Laboratories (NAL), the research arm of Australian Hearing.

I am very impressed with the 2019 Medical Devices Fund grant recipients. Each of these companies has the potential to transform the delivery of healthcare and improve patient outcomes. These innovations address both current and future health problems and I am confident they will produce game-changing solutions for healthcare.

I would like to thank Professor Hugh Durrant-Whyte, all the members of the Expert Panel, and the staff in the Office for Health and Medical Research who provided leadership, guidance and support throughout the evaluation process.

To all those who applied for the Medical Devices Fund in this and previous rounds, I would like to thank you and encourage you to continue working on your technology. Your efforts, enthusiasm and persistence are creating real improvements in patient care and health outcomes.

Hon Brad Hazzard MP
Minister for Health and
Medical Research




A message from the Chair

Now in its seventh round, the Medical Devices Fund has proved itself to be an invaluable program. When appointed Chair of the Fund's Expert Panel, I was delighted to be working on a program that provides such a significant contribution to our State, through harnessing and supporting the translation of innovation and research.

The Medical Devices Fund could not have happened without the leadership and vision of the NSW Government. Supporting innovators in the medical technology sector has a direct impact on patient outcomes and the efficiency of the health system. The Expert Panel was delighted with the number and the quality of the applications this year.

This assessment was not an easy job and required time, effort and dedication. Thank you to the members of the Expert Panel, Dr Gregory Keogh, Dr John Parker, Mr Mark Phelps, Ms Kelly Constable,



Professor Gemma Figtree and Dr Katherine Woodthorpe AO. I would also like to thank the Sub Committee for their assistance with shortlisting and assessing the applications, and the Secretariat led by Dr Antonio Penna.

Congratulations to the 2019 Medical Devices Fund grant recipients, whose inspiring and innovative work will have a significant impact on the State's health system and the wider community.

Professor Hugh Durrant-Whyte
Chair of the Expert Panel



**Dr Sarah McDonald,
CEO and Founder**

Baymatob Pty Ltd



Baymatob™ is an Australian company founded after a traumatic birth experience of the CEO and mechatronic engineer, Dr Sarah McDonald. The company's founding product Oli™ is a non-invasive device to monitor pregnancy and labour progression. Oli™ provides a game changing opportunity within the obstetrics monitoring market. While current technology in this space relies on retrospective measures, subjective interpretation and directly impacts maternal birth experience, Oli™ opens up opportunities to assess and treat individual cases with predictive measures without impacting maternal activities.



Oli[™]

Oli[™] is currently developing working devices, collected animal and human data, gained the support of local health bodies and proactively works with a team of clinical advisors across a number of hospitals, districts and global health organisations.



Company/Organisation Name

Baymatob Pty Ltd

Public / Private Company

Private

Stage & Category

Early stage - medical device

Website

www.baymatob.com

Contact

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Dr Alex Birrell,
CEO

CleanSpace Technology Pty Ltd

CleanSpace[®]
HEALTH & SAFETY



CleanSpace Technology is a Sydney based company, founded by biomedical engineers from Resmed that specialise in design and manufacture of the next generation in respiratory protection equipment.

The company is developing a range of respirators for healthcare workers at risk of airbourne biohazards such as influenza, tuberculosis, measles and emerging pathogens responsible for recent global pandemics (MERS, SARS and Ebola). CleanSpace Halo is the world's first respirator specifically designed for healthcare workers. CleanSpace has attracted significant global engagement in both pandemic preparedness and routine patient care. The Company now has collaborations with leading teaching hospitals and healthcare providers.



There are major challenges with implementing new Personal Protective Equipment (PPE) in healthcare environments. During the last SARS epidemic 30% of healthcare workers contracted the disease. This project aims to improve the adoption of an innovative re-

usable respirator (CleanSpace) in acute care settings. Due to the urgency and strong global support, this project has the potential to accelerate adoption to positively impact the protection for healthcare workers at risk of deadly air borne hazards in Australia and globally.



Company/Organisation Name

CleanSpace Technology Pty Ltd

Public / Private Company

Private

Stage and Category

Stage: Growth & global expansion

Category: Device development and manufacture

Website

www.cleanspacetechnology.com

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Dr Alex Birrell, CEO

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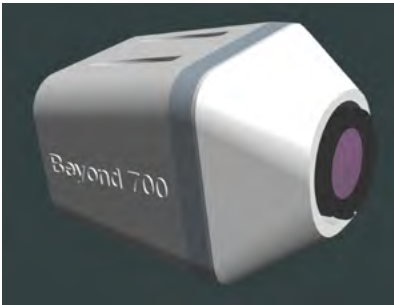
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**Professor Thomas Millar,
CEO**

Beyond 700 Pty Ltd

Beyond 700



The tear film, a thin moist layer spread over the front of the eye by blinking, is essential for visual acuity and maintaining healthy eyes. Tear film problems occur in more than 15% of the population and if not diagnosed early, the condition progresses leading to diminished vision and constant, debilitating pain. Tear film problems have various causes including environmental factors, using glaucoma medications, wearing contact lenses and having surgical procedures on the eye. In addition, ophthalmologists need certainty that the tear film is healthy before cataract surgery so that post-operative recovery is rapid and that the replacement lens has the correct power.

The pervasive problem is that current diagnostic tests are imprecise, time consuming, and often diagnosis is a best guess. Hence many patients are misdiagnosed or underdiagnosed, receive no treatment or the wrong treatment, and in addition the effect of the treatment cannot be monitored.



To address this problem, Beyond 700, a local start-up, has developed the TearView® system. This system allows clinicians for the first time to see the formation and integrity of the normally 'invisible' tear film. The TearView® system is in pilot production, and clinical evaluations of over 200 patients have demonstrated that with TearView® not only can clinicians diagnose tear film problems quickly and with certainty, but also they can objectively monitor the effects of treatment. This saves significant clinical time by replacing the current unreliable and time consuming diagnostic tests and

improves outcomes for patients allowing them to return to a normal life, faster.

The TearView® system has been developed by Beyond 700 in consultation with eye care specialists as an add-on to the existing equipment. It is based on the latest infrared technology and includes bespoke software that is intuitive to use and readily integrates with the clinician's work flow. Two patent families protect the technology and methodology. One patent has been granted in Australia while the second, in the PCT phase, has been examined.

Company/Organisation Name

Beyond 700 Pty Ltd

Public / Private Company

Private

Stage & Category

Early stage, research and manufacturing, NSW (Sydney) company

Website

www.Beyond700.com.au

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Hugo Rourke,
Director and CEO

Perx Health



Perx is a digital therapeutic that engages and motivates patients to better manage their conditions and form healthy habits. Our evidence-based digital programs for behaviour change are designed for managing serious health conditions, including diabetes, cardiovascular conditions and mental health conditions.

The technology consists of an engaging smartphone app for patients, backed by proprietary behavioural science and AI-powered algorithms. Perx surprises and delights users to build their engagement with the digital disease management programs and thereby with their healthy habits. To do so, the company applies gamification, extrinsic rewards (like movie tickets and gift cards), community support and challenges to motivate patients. By combining proven behavioural science with evidence-based



medicine, Perx is setting out to systemically address adherence and healthcare engagement.

Over time the digital therapeutic technology is becoming more sophisticated in how the motivators are personalised to best match each individual. This is a novel approach and very complementary to the high-touch educational approaches that are traditionally used in the health system.

Perx is partnered with several large companies to trial its solution in real-world populations including NSW Health and leading Australian insurers. The Perx digital therapeutic has been tested with thousands of Australian patients against standard care and has demonstrated increased health engagement, materially improved disease management behaviours and outstanding patient satisfaction.



Company/Organisation Name

Perx Health

Public / Private Company

Private

Stage & Category

N/A

Website

www.perxhealth.com

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Medical Devices Fund Expert Panel

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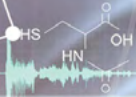


MEDICAL ANALYSIS

02.08.38 | MALE



DOCTOR



Medical Devices Fund Expert Panel



Professor Hugh Durrant-Whyte (Chair)

Professor Hugh Durrant-Whyte is the NSW Chief Scientist & Engineer. From 2016-18, he was Chief Scientific Advisor to the UK Ministry of Defence. From 2014-16 and from 2002-2010, he was a Professor and ARC Federation Fellow at the University of Sydney. From 2010-2014, he was CEO of National ICT Australia (NICTA), and from 1995-2010 Director of the ARC Centre of Excellence for Autonomous Systems and of the Australian Centre for Field Robotics (ACFR).

Hugh is a world-leading authority on machine learning and robotics, and its application in areas including cargo

handling, mining and defence. He has published over 300 research papers, graduated over 70 PhD students, and has won numerous awards and prizes for his work, including being named 2010 NSW Scientist of the Year.

In his career he has worked with many major companies, has co-founded three successful start-up companies, and has won many awards including being named 2008 Engineers Australia NSW Engineer of the Year. He is particularly well known for his work with Patrick in delivering the automated container terminals in Brisbane and Port Botany, and for his work with Rio Tinto in pioneering the delivering the automated “Mine of the Future”.

Hugh is an honorary Fellow of Engineers Australia (HonFIEAus), a Fellow of the IEEE (FIEEE), Fellow of the Australian Academy of Technological Sciences and Engineering (FTSE), Fellow of the Australian Academy of Science (FAA), and a Fellow of the Royal Society of London (FRS).



Dr Greg Keogh

Dr Keogh is a Senior Staff Specialist Surgeon at Sydney's Prince of Wales Hospital, and a Fellow of the Royal Australasian College of Surgeons (FRACS). His clinical interests include the management and treatment of gastrointestinal cancer, particularly in the upper gastro-intestinal tract.

He is currently surgical director of the Prince of Wales Hospital Operating Theatres. He also currently fills the role of Clinical Stream Director for Surgery, Anaesthetics and Peri-operative Medicine for the South East Sydney Area Health Service.

His other roles include National Director of the CPMEC Australian Curriculum Framework for Junior Doctors Project, and a senior medical adviser to HETI (Health Education Training Institute). He is a member of the NSW Surgical Services Taskforce, and the NSW Acute Care Taskforce.

Dr Keogh has been a former Director of Clinical Training at the Prince of Wales Hospital, chair of the Postgraduate Medical Council of NSW and state director of basic skills courses for RACS.

Medical Devices Fund Expert Panel



Professor Gemma Figtree

Professor Figtree is a Professor in Medicine at the University of Sydney and is an interventional cardiologist at Royal North Shore Hospital. She completed her DPhil at Oxford University in 2002 supported by a Rhodes scholarship and has continued working in the field of oxidative signalling and translational cardiovascular research.

Professor Figtree is committed to improving the care for patients with heart attack- developing methods of identifying those at highest risk of adverse outcome, and discovering novel therapies to prevent and treat events. Discoveries in her laboratory have been published in leading journals Circulation, European Heart Journal, JACC and Circulation,

with over 100 publications in peer-review journals. Professor Figtree is a principal investigator on grants from NHMRC, the Heart Foundation, Heart Research Australia, and Sydney Medical Foundation that have totalled more than \$4 mill. She is personally supported by a Heart Foundation Future Leader Fellowship and a NHMRC Career Development Fellowship.



Dr John Parker

Dr Parker is the Founder and CEO of Saluda Medical. Dr Parker founded the Implant Systems team at NICTA that developed the closed loop feedback technology. He has over 20 years of experience in medical devices, including 13 years at Cochlear Limited, where he served in the role of Chief Technology Officer and executive member of the board of directors.



Mark Phelps

Mark Phelps is Head of Business Development at Cochlear Limited where he leads a team responsible for M&A, investments, licensing and new partnership development for the global business.

Mark has over 25 years of diverse business experience, working globally across multiple industries in the areas of corporate and business development (M&A), business strategy and planning, strategic program execution and finance. Leadership capabilities include developing and leading large multi-functional, multi-regional teams on complex strategic programs of work across many aspects of business operations, as well as directly leading teams of up to 50 people across a spread of functions and geographies.

Mark has spent the last 13 years in the medical device industry with Cochlear, and before that worked in sectors including investment banking, financial services, travel and transport.

His time at Cochlear has seen Mark play a major role in the development of the corporate strategy, and lead programs to define and execute strategy in the areas of: customer experience; connected health; business operations review, and development of global shared services. In previous roles at Cochlear, Mark has also had responsibility for business planning, risk management, strategic analytics, process architecture and business intelligence. In the last 4 years he has focussed on the development and execution of an investment, acquisition and partnership strategy for Cochlear. In this role he has executed on numerous deals in areas such as cloud software, artificial intelligence, implantable medical devices for several different indications, diagnostics and pharmaceuticals. Mark is a CPA and holds a MBA from the AGSM.

Medical Devices Fund Expert Panel



Dr Katherine Woodthorpe AO

Dr Woodthorpe is an experienced non-executive director serving for 20 years on the boards of a variety of organisations including listed entities, government boards and not-for-profits. She has a strong track record in a broad range of technology orientated industries including healthcare, mining and renewable energy . She has been cited in various media as one of Australia's most influential people in innovation.

Dr Woodthorpe has a long experience and track record in public affairs including media and government relations, working with governments and oppositions for over 20 years. She is currently Chair of three CRCs including the Hearing CRC and has been a Director on the boards of several others. She is currently a member of the National Health and Medical Research Council and was a Director of Sirtex Ltd which was recently sold for \$1.9B.



Kelly Constable

Kelly Constable is a senior business executive offering 20 years of life science experience, including eight recent years leading the commercialisation of breakthrough digital/mobile applications in the healthcare arena in the US and EU. She has a proven track record driving value within a top global biotech organization, and through partnerships with multi nationals.

She is co-founder of two med tech start ups and an active investor. Currently, Kelly is the Co-Founder and CEO of AULUS, accelerating the commercialization of high potential life sciences and med tech companies. She leads the strategy and global development of the Australian Genomic Cancer Centre and serves on the Board of Directors of AND Health and Prota Therapeutics.

