

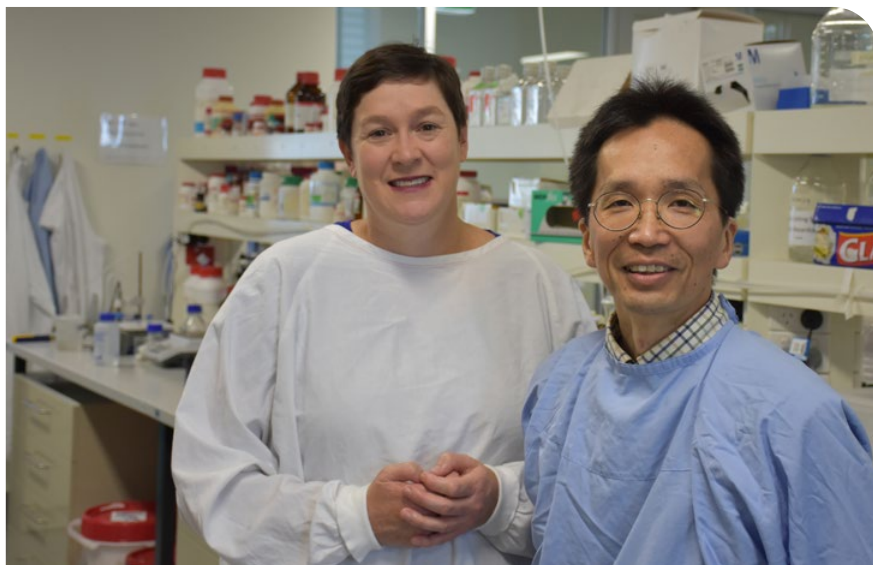
KOLLING INSTITUTE

DECEMBER 2019 | ISSUE 4

NEWS



Closer international ties



Breakthrough discovery



New Kolling website goes live

Discovery into reality



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Health
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MESSAGE FROM THE DIRECTOR of RESEARCH

It has been a busy year for our team of researchers and support staff and I would like to acknowledge the significant contribution that everyone has made in their individual area. The Kolling took an important step forward this year with the signing of a new joint venture agreement and the establishment of the governing committee to oversee our new direction. Next year the Kolling Institute's Research Strategy will be confirmed and further consultation will be undertaken through surveys and workshops to gain your views and input.

Next year also marks our 100 year anniversary – an important milestone we will be celebrating throughout the year. As the longest running medical research institute in New South Wales, the Kolling has held a key role in research activities for a nearly a century. Today we have a large, impressive team and I look forward to continuing to support and promote the excellent work we are doing here.

One way we will be promoting our work and range of expertise will be through the new Kolling Institute

website. Thank you to everyone who has contributed to the website. It features a wealth of information and will be consistently updated with the latest news.

I would like to commend the latest recipients of the Beryl and Jack Jacobs travel award, who will all be taking part in international trips to broaden their research experience and develop new relationships. These trips help to strengthen our research and professional standing, and promote our research work to the rest of the world. I would also like to recognise Dr Yo Otsu for his part in an international team which has discovered a receptor in the brain, which regulates moods. The breakthrough could lead to the development of new mental health and pain drugs.

2019 has been especially busy for me and I have been fortunate to participate in a host of conferences and professional opportunities. This has included the festschrift activities for Professor Salvatore DiMauro – known as the father of Mitochondrial medicine. I studied with Professor DiMauro at Columbia University in

New York for three years, completing my post doctoral studies before joining the Kolling.

I recently travelled to Canberra for the Australian Association of Medical Research Institutes conference, to learn how the Kolling Institute can work with other Australian medical research institutes to further benefit from government initiatives like the Medical Research Futures Fund.

I have also just returned from the combined SYNERGIES and LEAP program in Bangkok, which was co-ordinated by the International Parkinson and Movement Disorder Society.

As course director, it was fabulous to teach leadership skills to young neurologists and emerging leaders from 13 Asian countries. We fostered collaboration between clinicians and basic science researchers to integrate their research work into clinical practice; a philosophy that we are also following here at the Kolling Institute.

As we approach Christmas, I'd like to wish everyone a relaxing break and a wonderful time with their families.



A/Professor Paul Wrigley, Professor Paul Glare and Dr Claire Ashton-James

Calls for chronic pain to become a national health priority

A team of researchers from the Pain Management Research Institute joined international speakers at a symposium in Sydney addressing the complex challenges of deprescribing opioids for chronic pain.

Senior lecturer and social psychologist Dr Claire Ashton-James said one in five Australians live with chronic pain and until recently, many relied on opioid medications, such as oxycodone, codeine, and tramadol.

“There’s been a major shift in treatment advice in recent years, with recognition that opioids offer little long-term benefit and come with significant risks,” she said.

“Stopping opioid use however is easier said than done. Many patients fear their pain will become unbearable and doctors find it difficult to explain to patients why

opioid medications are no longer recommended.

“Patients must be provided with strategies to help them cope as part of a multi-disciplinary pain management approach. This includes regular exercise and physiotherapy, nutrition planning, pain education, and the use of cognitive and behavioural strategies to help manage pain flare ups.

“We need to raise community awareness of chronic pain, increase pain education across the healthcare system and provide better access to non-pharmacological approaches to pain management.”

Also speaking at the international symposium was Associate Professor Paul Wrigley, a pain medicine specialist physician, who is based at the Kolling and Pain Management Research Institute.

“Reducing a person’s reliance on opioids as a primary way of managing their pain is important, but the complexities of each person’s situation need to be considered and extra support offered where necessary,” he said.

“There are many easily accessible, practical resources to guide healthcare professionals, such as the ACI Pain Management Network Opioid Quicksteps, however more promotion of these resources is needed.

“Ongoing one-on-one collaboration between pain medicine specialists and GPs is also crucial in complicated situations to help guide and support decision making.”



International experience strengthening our research

Researchers within the Kolling Institute are taking advantage of a host of international opportunities after receiving a Beryl and Jack Jacobs travel award.

Five researchers took out an award in the second round of the program this year.

Scientific Officer Dr Martyn Bullock said he was immensely grateful to receive the award which will enable him to travel to the Dana-Faber Cancer Institute, Harvard Medical School.

"I will receive training in molecular techniques they have pioneered to facilitate cancer diagnosis from liquid biopsies," he said.

"This will be a valuable experience as the Cancer Genetics laboratory at the Kolling Institute will be the first to trial these novel diagnostic techniques in Australia next year."

Dr Yingyu Feng will visit the Musculoskeletal Epidemiology research lab at Oxford University to learn techniques for handling large-scale health data and data linkage, and applying those techniques to Australia.

"I plan to present my research at one of the most eminent conferences in the area of osteoarthritis research, the 2020 Osteoarthritis Research Society International World Congress in Vienna, Austria," Dr Feng said.

"The Beryl and Jack Jacobs travel fellowship will give me an unrivalled opportunity to collaborate with world experts and drive quality improvement in osteoarthritis management."

Injury Epidemiologist Dr Lisa Sharwood from the John Walsh Centre, located within the Kolling Institute, planned to use the grant to travel to Wales to present her research findings at the 4th International conference for Administrative Data Research.



Dr Yingyu Feng



Dr Martyn Bullock

Dr Sharwood will also be meeting with the founders of the SAIL databank to learn more about how Wales successfully linked their entire population's health records and outcomes data.

"Using big data effectively can aid efforts to improve healthcare and patient outcomes locally and nationally, and I'm looking forward to learning key strategies for how best to achieve this," Dr Sharwood said.

Dr Jillian Eyles from the Institute of Bone and Joint Research, also part of the Kolling, said she was thrilled to receive the travel award as it will enable her to travel to Keele

University in the UK for a course in individual participant data meta-analytic techniques.

"I'll be applying these techniques to a large international project combining clinical cohort data to investigate the effectiveness of nine large osteoarthritis management programs," she said.

"I'll work in Keele with collaborators to progress this study and will present a protocol of this project at the Osteoarthritis Research Society International in Vienna.

"As a result of these opportunities, I'll be able to meet and learn from some of the leading experts in this field."

Dr Karin Aubrey from the Pain Management Research Institute will attend a conference in Colorado titled "Pain - aligning the target".

"This will be my first opportunity to attend a conference that specialises in pain research. I will present new data from my lab and look forward to discussing it with experts in the field," she said.

"I will also visit some laboratories to see their work first-hand, learn about the techniques that work best and explore collaborative opportunities."



New Kolling website goes live

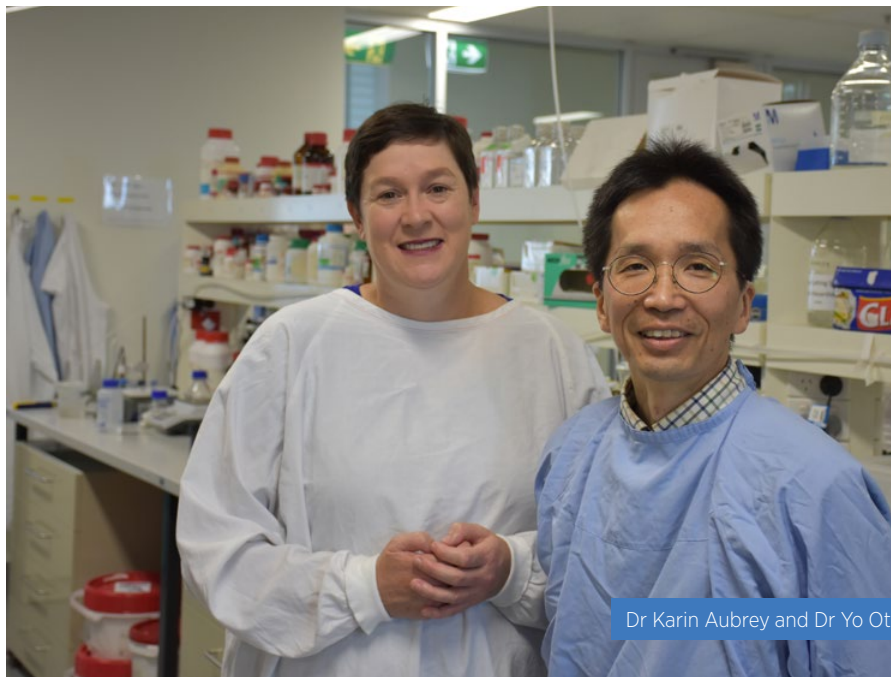
The new Kolling Institute for Medical Research website has been launched, showcasing the extensive range of leading research within the Kolling.

The website includes detailed information about our teams and the breadth of work to help diagnose, prevent and treat disease.

Executive Director of Research Professor Carolyn Sue said the website will be consistently updated with the latest news and information, and there'll also be the chance to submit fresh information reflecting the latest research projects, activities and achievements.

"The website is a valuable resource for the community, government and the media, helping to raise awareness of our world leading research, our experienced teams and our position as part of a large, respected health system," Prof Sue said.

Please check out the new website at www.kollinginstitute.org.au



Dr Karin Aubrey and Dr Yo Otsu

World-first discovery

Kolling Institute scientist Dr Yo Otsu and a team of researchers have discovered a unique receptor in the brain which can regulate negative moods.

The finding is the culmination of eight years of painstaking investigation, involving Dr Otsu and researchers from France, Canada and Hungary.

The research has been published in the academic journal *Science*, highlighting the discovery of the excitatory glycine receptor in a little known region of the adult brain, the medial habenula. Dr Otsu said he and his colleagues now believe the receptor plays a role in regulating negative moods.

"The function of the medial habenula is not very well understood, but it is thought to play a role in depression, stress, anxiety and nicotine addiction," said Dr Otsu.

"Therefore, the discovery of this rare type of receptor and its role in modulating anxiety means that it has the potential to be a highly specific target for mood regulating drugs.

"Existing medications to treat conditions like anxiety and depression have side effects because they affect the whole brain.

"The discovery of this receptor offers the potential to create much more targeted medicines with fewer side-effects."

Dr Karin Aubrey from the Pain Management Research Institute's Neurobiology of Pain Lab, where Dr Otsu now works, said the finding opens up a whole new area of brain research.

"Yo has brought such a depth of knowledge to the group. He interrogates every aspect of the data – an approach which has enabled him to consistently produce data of the highest level and impact. We are very fortunate to have a researcher of his calibre working with us, and I can't wait to see what he does next," she said.

"We are starting new research within the Kolling to further understand the role of this receptor, with the ultimate goal of developing medications to target it."



Professor David Hunter

Research testing value of supplements for osteoarthritis

A team from the Kolling's Institute of Bone and Joint Research is seeking recruits for a clinical trial assessing whether a supplement combination can improve symptoms for people with hand osteoarthritis.

An incurable joint disease, osteoarthritis is one of the leading causes of pain and disability. It affects around 1.9 million Australians and in the next 30 years, 11 per cent of the population are predicted to have the condition.

Chair of the Institute of Bone and Joint Research and world-leading osteoarthritis expert, Professor David Hunter, said many people are turning to complementary and alternative medicines, as existing treatments are limited and provide only symptomatic relief.

"Recent evidence has challenged the recommendation for the first-line medication of paracetamol and anti-inflammatories due to the limited treatment effect and potential side effects," he said.

"This means many people are using complementary and alternative medicines - spending on average more than \$1100 per-person a year on these medicines, so it's important to consider their effectiveness.

"We know 69 per cent people with osteoarthritis are taking supplements, 33 per cent are using two and 27 per cent are using three or more supplements.

"Initial research indicates some of the most widely used supplements such as glucosamine and chondroitin

are not clinically effective in the short-term, while lesser-known supplements boswellia serrata extract, pine bark extract, curcumin and methylsulfonylmethane had the largest treatment effects for symptomatic relief."

The Institute of Bone and Joint Research is now conducting a 12-week clinical trial evaluating whether a supplement combination can improve symptoms of people with hand osteoarthritis, compared with a placebo.

The RADIANT study is online study and anyone in Australia can participate. Details are available at: www.tinyurl.com/RADIANTstudy



Professor Gemma Figtree

Outstanding Research Leadership Award

Capping off a stellar year of achievements, Professor Gemma Figtree has earned another accolade for her contribution to research.

The interventional cardiologist at Royal North Shore Hospital has received the Award for Excellence in the category of Outstanding Research leadership by the University of Sydney's Faculty Medicine and health.

Prof Figtree, who also heads up the Australian Cardiovascular Alliance, was appointed as chair of an expert advisory panel to tackle the nation's two biggest killers – heart disease and stroke – announced early this year by Federal Minister for Health Greg Hunt.

The award of \$2500 will go towards professional development or in support of research and teaching activities.

Earlier this year, Prof Figtree was awarded a \$750,000 grant by the NSW Government to help tackle Australia's number one killer heart disease.



A chance to support our research

The new look NORTH Foundation has launched its 2019 Christmas appeal, seeking help to fund more research into the best use of medications by older people.

Head of the Kolling Institute's lab of Ageing and Pharmacology, Professor Sarah Hilmer said one in five older people take at least one medicine where the risks of harm currently outweigh the benefits, while many older people say they would be happy to stop a medicine if their doctor said they could.

"We have developed a tool for clinicians, called the Drug Burden Index, to guide the safer use of medicines," she said.

"The resource highlights the impact of multiple medicines on physical and cognitive function, and is now

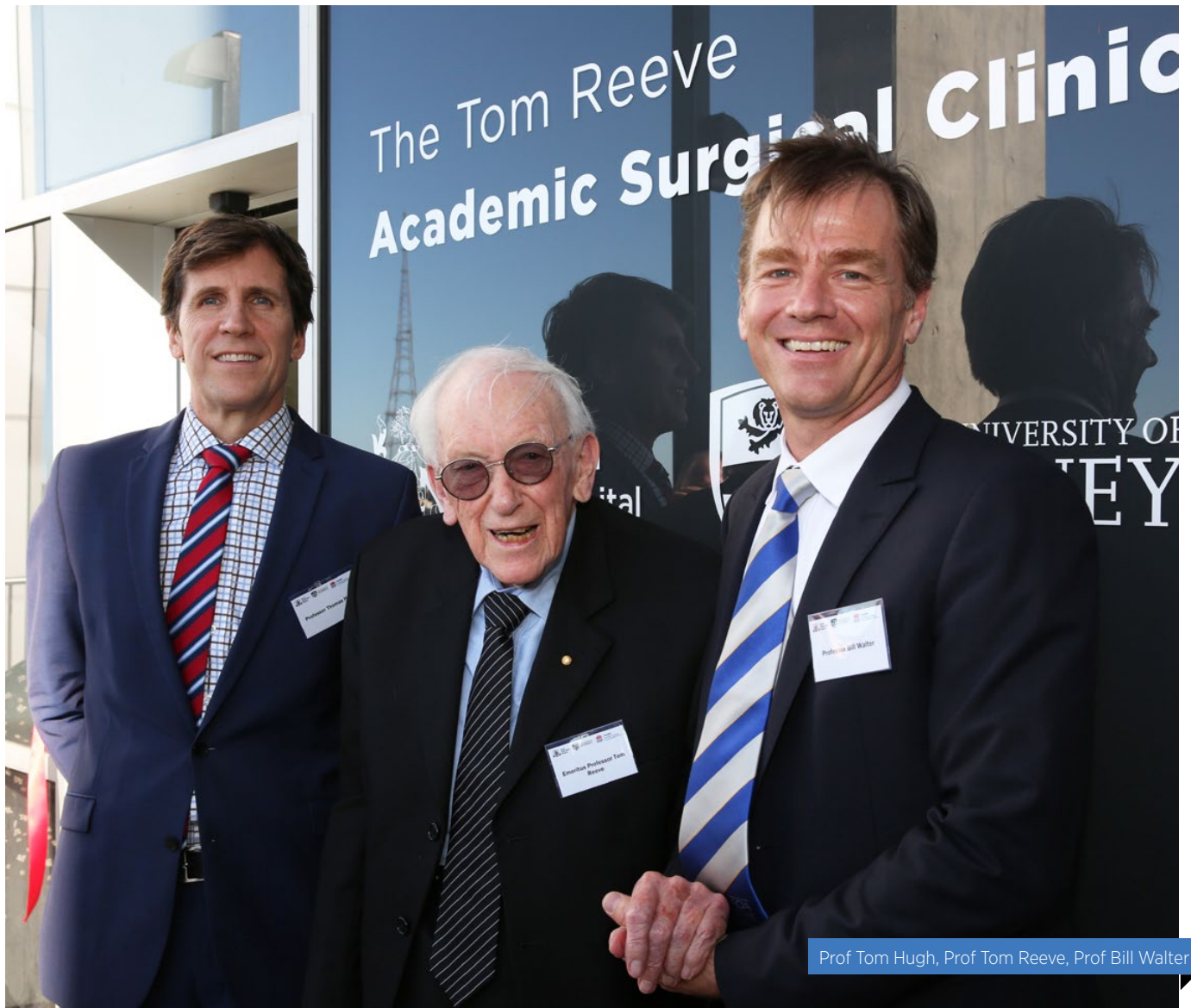
being incorporated into practice in hospitals, community and residential aged care settings.

"We need further support to extend our work within the Penney Ageing Research Unit and help improve the outcomes from medicines in older people, not just in Australia but also internationally."

NORTH Foundation Chief Executive Officer Gilbert Lorquet said all staff were encouraged to help support their colleagues by spreading the word about our Christmas Appeal and fostering community engagement.

If you or someone you know would like to support the Christmas Appeal please visit:

<https://northfoundation.org.au/how-you-can-help/donate/>



Prof Tom Hugh, Prof Tom Reeve, Prof Bill Walter

Centre of surgical excellence unveiled

After many years of planning, the Tom Reeve Academic Surgical Clinic has officially opened on the ground floor of the Kolling building.

The clinic has been named in honour of Professor Tom Reeve - the inaugural Professor of Surgery at Royal North Shore Hospital (RNSH) and former president of the Royal Australasian College of Surgeons.

Under his leadership, Royal North Shore developed into a centre of surgical, educational and research excellence.

The clinic will build on the foundations of academic surgery and provide opportunities for surgical-outcomes research and clinical trials in a supportive, academic environment.

Chair of Orthopaedics and Traumatic Surgery Professor Bill Walter said Professor Tom Reeve and Tom Taylor, the inaugural professor of Orthopaedics and Traumatic Surgery, established the chairs with the University of Sydney fifty years ago.

“Together, they laid the foundation for excellence in academic surgery and today, we have vibrant surgical

departments dedicated to patient care as well as research and education,” Prof Walter said.

“Collaboration with engineers and other researchers means we have an exciting opportunity to lead innovation at the intersection of technology and biology.”

The academic surgical clinic is a collaborative initiative between the Northern Sydney Local Health District, the Division of Surgery and the Royal North Shore Hospital’s Surgical Education Research Training Institute.



Professor Carolyn Sue with Tom and Martine Vanderspuy

Creativity driving new research trial

A special art exhibition has raised close to \$100,000 for a trial of an innovative treatment for mitochondrial disease.

The Martine Gallery at Northbridge hosted the Art with Heart exhibition in conjunction with the NORTH Foundation. All proceeds are going to an LED light therapy trial which will be undertaken by researchers within the Kolling Institute.

Gallery owner Martine Vanderspuy co-ordinated the event, inspired by the positive impact of light therapy on her 16 year old son Tom, who has mitochondrial disease. Martine has

now raised almost \$400,000 for research.

Kolling Institute Director and mitochondrial disease international expert, Professor Carolyn Sue, helped launch the exhibition, thanking all those involved.

“It is absolutely fabulous to have supporters, like Martine and the community, raise awareness and funds to improve treatment for patients with mitochondrial disease. It’s a debilitating genetic disorder which robs the body of energy and causes multiple organ dysfunction,” Professor Sue said.

“We are committed to innovative research, like this light therapy trial, to find new ways to manage the disease. There are currently very few effective treatments for mitochondrial disease, demonstrating the importance of investing in new clinical trials like this one.”

The light therapy could potentially treat patients with Parkinson’s disease, Alzheimer’s disease, motor neurone disease, cardiovascular disease, diabetes and cancer.

Donations can be made to neurogenetics.everydayhero.com.au/martine



Kolling researchers share latest round of Medical Research Future Funds

A project to standardise the treatment advice for patients with musculoskeletal conditions has received a boost with a \$200,000 grant from the Federal Government.

Professor David Hunter and Associate Professor Manuela Ferreira are leading a group of musculoskeletal researchers and clinicians to develop new evidence-based training resources and patient information to promote musculoskeletal health.

The program is aimed at unifying care of musculoskeletal diseases, including osteoarthritis and lower back pain, to ensure patients receive consistent, scientifically-backed treatment.

“There are tremendous benefits for patients when all healthcare professionals provide consistent information and clear treatment plans, and we’re working and to ensure all patients receive that care,” said Associate Professor Ferreira.



Grant Mundell addresses the event



Sandy Eglin shares her experience

NORTH Foundation gains key support

More than 100 people attended a special cocktail event to mark the launch of the NORTH Foundation, the fundraising partner of the Northern Sydney Local Health District and the Kolling Institute of Medical Research.

Oncology clinician and researcher, Dr Nick Pavlakis, addressed the event, along with patients Grant Mundell and Sandy Eglin, who detailed their emotional journeys and gratitude for the expert cancer care they’ve received.

Grant has had a long path to recovery after being diagnosed with pancreatic cancer. He is now back at work after major surgery, nine rounds of chemotherapy and radiation.

He said the multi-disciplinary specialist team at Royal North Shore Hospital (RNSH) was key to his survival.

“The team works as one cohesive unit, offering a unique model of care. They are conducting clinical research as well, improving the treatment options for those with cancer,” Grant said.

“I would encourage everyone to do what they can to support the foundation.”

Sandy shared her experience of being diagnosed with pancreatic cancer just years after suffering breast cancer. Sandy has developed stage 4 pancreatic cancer and is receiving ongoing care.

“Every day I get up is a miracle, and while I still have many challenges, my love for my family keeps me going. We have become very close,” she said.

“I am very grateful for the care I have received from the world leading experts at RNSH. They are at the forefront of research in this area and they are consistently broadening treatment options.

“As a way of giving back, we have raised more than \$100,000 for the Bill Walsh Lab and I would urge the community to back the foundation. Research developments can save lives and make all the difference.”

The NORTH Foundation has unveiled its five-year plan to enhance healthcare services across the district.

It is committed to becoming a major contributor to world class medical research and helping ensure the community receives excellent care throughout their lives.

Latest News from the Kolling Institute

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Support patient care services this Christmas.

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*Donations over \$2 are tax deductible



The NORTH Foundation is the official fundraising partner of the Northern Sydney Local Health District (NSLHD) including:

