hence he



An Obituary - Richard (Dick) Norman Shaw

Fundraiser and steadfast supporter of The Baird Institute

Richard Norman (Dick) Shaw's journey began on August 14, 1941, in Invercargill, South Island, New Zealand. His early years in Bluff, alongside his parents and cherished older sister Robyn, laid the foundation for a life characterised by resilience, passion, and remarkable adventures.

From his days as a Sea Scout, where his love for rugby union first blossomed, to being chosen as hooker for the combined primary school team, Dick's dedication to the game and his natural camaraderie with teammates became evident early on. Despite facing challenges like dyslexia, his 'glass half full' attitude and knack for forging deep friendships, endeared him to all who knew him.

Transitioning to Southland Boys High in Invercargill, Dick's passion for rugby flourished further, leading him to prioritise sport over piano practice and academic pursuits. Joining the Southland High Old Boys Rugby Club marked the beginning of lifelong connections and enduring memories in the world of rugby.

Beyond sports, Dick's life was a tapestry of adventures and memorable experiences. From organising turnip sales to funding a new rugby clubhouse to charging for viewing the 1960 Olympics on a scratchy TV, his fundraising skills and zest for life were evident from an early age.

Dick's thirst for exploration took him across continents, from living on a floating hostel ship in Deep Cove, Doubtful Sound, to embarking on a riotous six-week trip aboard the Southern Cross to Southampton, UK. His travels extended to driving buses for Protea Tours across Europe and India, experiencing the wonders of countries like Afghanistan and relishing the camaraderie of fellow travellers.

He met his beloved wife Georgie during a rugby match in Oslo and built a life centred on family, friends, and helping others. Dick's passion for rugby extended beyond games, fostering bonds and coaching successes that touched

lives globally. Their shared adventures and deep connection culminated in a wedding at the Wayside Chapel in Sydney in early 1971, which led to a lifetime of cherished memories.

Dick's career in recruiting, fuelled by his genuine interest in people's stories and his desire to help them achieve their dreams, was marked by success and the formation of lifelong friendships. His commitment to making a difference extended to fundraising for various causes - including The Baird Institute - and nurturing the potential of young people, believing strongly in their ability to shape a better future.

In his retirement years in Narrawallee, Dick found joy in singing with the Glorious Mud Singers, reconnecting with farming, and embracing the camaraderie of golfing communities. His legacy lives on in the countless lives he touched with warmth, generosity, and a zest for life that knew no bounds.

Dick had a deep passion for reading, particularly thrillers and detective stories, showcasing his excellent memory for facts and a knack for remembering names and faces. He possessed a remarkable gift for forming meaningful friendships. Despite facing numerous medical challenges throughout his life, Dick's genuine interest in people endeared him to everyone he encountered, from cleaners and support staff to nurses and medical teams. Even as he prepared for what would become his final surgery, he was already envisioning his next fundraising effort for The Baird Institute.

Dick passed away after complications post-surgery in December 2023. As we bid farewell to Dick Shaw, we celebrate a life rich in experiences, friendships, and a deep love for embracing life's adventures to the fullest. His memory will continue to inspire us all.

As Georgie, his wife, said "If I had to sum up Dick Shaw in just a few words I would say he was warm, generous, honest, loving, fun and at times a monumental pain in the butt".

We will leave you with Dick's words: "Love many, trust a few but always paddle your own canoe."



A NOTE FROM OUR PATRON

The Hon. Michael Kirby AC CMG

Dear Friends,

It is with great pleasure that I extend my warmest greetings to all supporters of The Baird Institute. As patron, I am privileged to witness the remarkable impact of your generosity and your commitment to advancing heart and lung health.

My admiration for the dedication and passion exhibited by the researchers, staff, and supporters of The Baird Institute knows no bounds. Your collective efforts are driving transformative change in the field of cardiothoracic research, offering hope to countless

individuals affected by heart and lung diseases.

As we reflect on the achievements of The Baird Institute and look ahead to the future, I am filled with optimism and gratitude. Your unwavering support enables The Baird Institute to push the boundaries of scientific discovery, pioneer innovative treatments, and improve patient outcomes.

I am particularly excited by the promising research initiatives highlighted in this newsletter, from Professor John O'Sullivan and his team's groundbreaking work in addressing "stiff" heart failure to the innovative clinical trials underway. Each endeavour represents a significant step forward in our shared mission to combat heart and lung diseases and enhance the quality of life for patients.

I, along with the entire Baird Family, extend condolences to the Shaw family following the news of Dick's death in December last year.

As we continue on this journey together, I am inspired by the dedication and determination of the entire Baird Institute community. Your commitment to excellence and your steadfast support are the driving forces behind our success, and I am honoured to stand alongside you in this noble endeavour.

Thank you for your continued generosity and advocacy on behalf of The Baird Institute.

With warm regards,

, essething

The Hon. Michael Kirby AC CMG

VALE DICK SHAW

Professor Paul Bannon

Only a few of the thousands of patients we see in cardiac surgery become good friends. Dick Shaw was one of those.

Dick faced three major heart surgeries, with each one carrying a greater and greater risk. But Dick's optimism and love for life and his family drove us to keep trying.

As his family points out, he worked hard, he played hard, but he loved hard as well.

Dick underwent numerous surgeries primarily because the available replacement valves, meant to address heart valve failure, have limited durability. We have no



valve that is perfect and unfortunately the valves failed him twice. With the third surgery, we didn't get a chance to see if the newer valves were going to last longer, because unfortunately we couldn't get him through the procedure.

Dick went into the surgery optimistically, as I did, and I very much value his trust in me and the team on that day. Dick was always keen to support the research of The Baird Institute, and one of the key areas happens to be heart valve design. We must keep working to do this better. We must keep working to do this better for Dick.



A NOTE FROM OUR CEO

Catherine Rush

Dear Supporters,

I am delighted to present to you the latest edition of our biannual newsletter, **Heart to Heart**, highlighting the groundbreaking research and impactful initiatives that are taking place at The Baird Institute. Your unwavering support continues to drive our mission forward, and we are grateful for the opportunity to share with you the progress made possible by your generosity.

In this edition, we celebrate the remarkable life of Richard (Dick) Shaw, a dedicated supporter and fundraiser for The Baird Institute. Dick's legacy of resilience, generosity, and passion for

life serves as an inspiration to us all. His unwavering commitment to advancing heart research and his enduring belief in our mission, remind us of the importance of our work and the lives we strive to improve.

Inside we provide you with updates on our ongoing research initiatives, including the pioneering work of Dr. Robert Hume who is exploring cardiac regeneration and the development of degradable artery grafts and the work of Professor John O'Sullivan and his team who are tackling" stiff" heart failure, for which therapies are lacking. Their pioneering research focuses on replenishing NAD, showing promise in reversing this condition. The CardioNAD clinical trial aims to validate this approach, addressing a critical unmet need in heart failure treatment.

Through your generosity, we are pushing the boundaries of scientific discovery and revolutionising the treatment of heart and lung diseases.

We are excited to introduce you to Mr. Matthew Taper, a recipient of a Baird Institute Scholarship, whose research focuses on understanding the factors involved in heart ageing and heart failure. Matthew's work underscores the transformative impact of your support in nurturing the next generation of researchers and driving innovation.

Moreover, we spotlight the invaluable contributions of Lisa Turner and Lorna Beattie, who manage the various clinical trials with dedication and expertise. Their collaborative efforts ensure the success of our research endeavours, facilitating vital collaborations and advancing patient care.

Finally, we extend a warm invitation to our upcoming event on June 28th, where we will provide you with a comprehensive update on our research and give you the opportunity to engage with our team of dedicated researchers. Your presence and support are instrumental in propelling our mission forward, and we look forward to sharing our progress with you.

Thank you for your unwavering commitment to our cause. Together, we are making a difference.

Warm regards,

therine Kud

Catherine Rush CEO, The Baird Institute

SCHOLARSHIP & GRANTS PROGRAM



SCHOLARSHIP RECIPIENT MR MATTHEW TAPER

I grew up just outside of Sydney in the Blue Mountains and completed my Bachelor of Science at the **University of Sydney**, majoring in physiology. My honours year was focused on diabetes, where I spent time investigating the factors involved in the release of insulin. Following my honours year and a subsequent short research scholarship, I worked in a pathology lab for just over a year. Although I enjoyed my time there, I found myself missing science. Fortunately, I had an encounter with Associate Professor Sean Lal, who generously offered me the chance to pursue a master's degree under his guidance and supervision.

I am in the process of converting from a master's degree to a PhD and have been extremely fortunate to receive a Baird Institute Scholarship for 2024 and 2025. This amazing opportunity will allow me to conduct important research into the potential key drivers that cause our hearts to age, as well as the relationship between ageing and heart failure. Specifically, I will be focusing on a group of factors that might be causing the aged heart to not relax properly, thus impairing its ability to fill with blood. I will also be investigating whether these same factors may promote cardiac regeneration following a heart attack.

SAVE THE DATE - 28 JUNE 2024

Susan Wakil Health Building, University of Sydney

We are thrilled to extend to our valued supporters a warm invitation to our upcoming event where we will provide you with a comprehensive update on the groundbreaking research being conducted at The Baird Institute. Your unwavering support has been instrumental in propelling our mission forward, and we are eager to share the progress made possible by your generosity.

At this event, you will have the opportunity to gain insights into the cutting -edge projects underway, learn about the latest advancements and witness firsthand the impact of your contributions. Our team of dedicated researchers will be on hand to discuss their work and answer any questions you may have. We look forward to seeing you there.

Vale

Our thoughts are with the families of the following generous supporters of The Baird Institute who have passed away in the last 6 months. Wishing you all strength and peace at this difficult time.

John Nizzari Dick Shaw Dennis Charles

RESEARCH UPDATE

CENTRE FOR HEART FAILURE & DISEASES OF THE AORTA



DR. ROBERT HUME PHD, SENIOR POSTDOCTORAL FELLOW

The Rob Bird Aortic Research Program, Centre for Heart Failure and Diseases of the Aorta

Since I started with the Baird Institute 1.5 years ago, my research accomplishments have grown exponentially. This is only possible through the continuous support of my supervisors and mentors within the *Centre for Heart Failure and Diseases of the Aorta* – Associate Professor Sean Lal, Professor Paul Bannon and Professor John O'Sullivan. Importantly, all these achievements are only possible with the support of the donors, which help fund our ground-breaking research here at the **University of Sydney**.

One major project we hope to publish this year, investigates the heart's natural ability to replace damaged tissue, known as cardiac regeneration. This heart tissue can die following a major event, such as a heart attack (aka myocardial infarction). Our new understanding of how the heart behaves in these circumstances could have major implications for how we treat heart failure.

We have recently begun research into our new degradable artery graft. This artery graft will be used to replace arteries that have been damaged through disease. As arteries are quite flexible, our replacement has been designed to be more elastic than currently available materials, which are too stiff. Additionally, after it has been surgically implanted, the replacement will slowly degrade and will encourage the artery to grow back together. It is through this process that the body will be able to heal itself, replacing damaged arteries, initially with our degradable replacement, followed by a new healthy blood vessel. This new artery graft could revolutionise how we treat artery disease, allowing patients to regrow their own damaged arteries.

I would like to thank all the wonderful supporters of **The Baird Institute** for helping us undertake such exciting and groundbreaking research.



This image shows dying heart muscle cells (magenta) surrounded by the collagen scar (cyan) that forms following a heart attack

CLINICAL TRIALS

CARDIOTHORACIC AND VASCULAR CLINICAL TRIALS

Lisa Turner and Lorna Beattie, Clinical Nurse Consultants (CNC) at Royal Prince Alfred Hospital

In this edition of the newsletter, we are excited to spotlight Lisa Turner and Lorna Beattie. Lisa and Lorna have collectively been managing the cardiothoracic and vascular surgery clinical trials for almost 20 years. They both have a nursing background in cardiothoracic and vascular surgery including intensive care and post operative management. In the early years they did not expect research to be their area of interest, however with time, they have become incredible advocates for research and thoroughly enjoy their work.

The cardiothoracic and vascular surgery departments participate in a combination of local, national and

CARDIONAD

Professor John O'Sullivan Centre for Heart Failure and Diseases of the Aorta.

Heart failure is a condition where the heart doesn't pump blood well or does so at the expense of elevated filling pressures.

The major need in heart failure today is for a form of heart failure where the heart becomes stiffer with age, accelerated by being overweight, obese, having high blood pressure, and being pre-diabetic or diabetic. This "stiff" form of heart failure is now the most common form of heart failure in the world. Shockingly, there are almost no therapies for this type of heart failure.

To fulfill this unmet need, Professor Paul Bannon has designed an innovative research project where a piece of tissue is taken from the heart of these patients at the time of cardiac surgery. Professor John O'Sullivan recently discovered that replenishing a molecule called NAD can completely reverse this type of heart failure in model systems. Now, Professors Bannon and O'Sullivan along with Professor Sean Lal, are undertaking the world's first clinical trial, called CardioNAD, of NAD repletion in this type of heart failure.

In a world-first, some heart tissue is taken from patients who are on the NAD medication to demonstrate how feasible replenishing NAD is using the precursor molecule.

This is an enormous undertaking, addressing a major unmet need.

international clinical trials, including device and drug trials, databases and tissue biobanks which cover a range of surgical techniques.

They also participate in providing data to national governing bodies, for example ANZSCTS (Australia and New Zealand Society of Cardiothoracic Surgeons). They perform regular audits to ensure adherence to predetermined unit KPIs and to ensure patient outcome deviations are detected and addressed.

Their collaborative efforts extend beyond the unit, fostering close ties with institutions such as The Baird Institute, The University of Sydney, The Charles



Koay YC, et al. J Am Coll Cardiol Basic Trans Science. 2024;10.1016/j.jacbts.2024.01.011

We have recently published some initial work examining the molecular changes in the tissue of these patients using the same NAD precursors, illustrated above . Now, we will undertake CardioNAD to demonstrate how this approach will work using an oral NAD precursor in heart failure patients. Perkins Centre, the Heart Research Institute, and numerous others within the Sydney Local Health District and nationally.

Lisa and Lorna state that their jobs "are the glue that pull all of these many facets of research into a well-oiled research unit comprising of two very intricate surgical departments". They are also well-regarded senior nurses offering support and education to the multidisciplinary teams.

In the following tables you will find a list of the current clinical trials that Lisa and Lorna manage.

CARDIOTHORACIC CLINICAL TRIALS

NAME OF PROJECT

CardioNAD

Determining Feasibility of Human Myocardial NAD+ Replenishment using Nicotinamide Riboside Supplementation.

Regeneration

The intrinsic regenerative capacity of the adult human heart in ischaemic heart disease.

COPOC

A prospective randomised placebo-controlled double-blinded study to assess the role of colchicine in decreasing myocardial damage post cardiac surgery.

TRiCS IV

Transfusion Requirements in Younger Patients Undergoing Cardiac Surgery. An international, multi-centre, randomised controlled trial to assess transfusion thresholds in younger patients undergoing cardiac surgery.

CLiP II

Cryopreserved vs Liquid Platelets for surgical bleeding. A phase III multicentre blinded randomised controlled clinical non-inferiority trial of cryopreserved platelets vs. conventional liquid-stored platelets for the management of surgical bleeding.

Thoracic aortic surgery database and tissue bank

Molecular Studies in Human Hypertrophic Cardiomyopathy Tissue Bank

Cardiothoracic Surgery Biobank

Sydney Cardiothoracic Surgeons Database/ ANZSCTS database export



VASCULAR CLINICAL TRIALS

NAME OF PROJECT

Alucent AVF

Safety and Feasability of the Vessel restoration system (VRS) to promote the physiologic and functional maturation of upper extremity Arteriovenous Fistula (AVF) formation in patients with chronic kidney disease.

The RPAH Vascular Surgery Tissue Bank and Database

GREAT

'Global Registry for Endovascular Aortic Treatment'.

MAT - The Metformin Aneurysm Trial

An investigator initiated and conducted, multicentre, international, double-blinded, placebo-controlled, parallel-group, randomised controlled trial to determine the effect of metformin on abdominal aortic aneurysm (AAA) associated events, including AAA repair and AAA mortality (due to aneurysm rupture).

Prevision

Prospective, Multicenter, Single Arm, Non-Randomized, Study of BD[™] Sirolimus Drug Coated Balloon Catheter for Treatment of Femoropopliteal Arteries.

T2EL

Vascular endothelial growth factor levels in type 2 endoleak requiring intervention. This is an investigator -initiated study by one of RPAH's vascular surgeons. He is investigating whether biomarkers may explain the behaviour of type II endoleaks.

Understanding Cellular Dysfunction in Atherosclerotic vascular disease.

This is an investigator-initiated study by one of RPAH's vascular surgeons. He is hoping to understand the changes to genes and proteins in atherosclerosis.

Many Thanks to Our Supporters

Every one of our donors has contributed in a significant way to our research and training programs and we are very grateful for their support, however we would particularly like to thank our principal supporters.





For a full list of all research publications of The Baird Institute, please go to our website www.bairdinstitute.org.au/our-publications/

Applied heart & lung surgical research

www.bairdinstitute.org.au

@ info@bairdinstitute.org.au

facebook.com/ bairdinstitute/

NSW, 2050

ABN 38 096 746 806

© 02 9550 2350

PO Box M85, Missenden Rd,

DONATE ONLINE VIA OUR SECURE WEBSITE



bairdinstitute.org.au



