

ANNUAL GALA DINNER

SCIENTIFIC EXCELLENCE

NEWS UPDATE



CENTENARY INSTITUTE GALA DINNER DAZZLES!
 Nearly \$260,000 to advance medical research in Australia was raised at the Foundation's Annual Dinner held at the Art Gallery of New South Wales.

We are extremely pleased to have the Bank of Queensland as our Principal Supporting Partner for a third consecutive year and to celebrate with valued supporters (comprising of allied health professionals, government, corporate organisations and high net worth individuals) how the Institute is achieving life-saving research which will ultimately improve human health and ensure our nation's health and prosperity.

We had the great pleasure of being joined by the New South Wales Premier, the Hon. Gladys Berejiklian, MP, as our Guest of Honour, Professor the Hon. Dame Marie Bashir AD CVO as our special guest, and several other dignitaries such as the Hon. Tanya Plibersek, MP, the Hon. Kristina Keneally, the Vice Chancellor of the University of Sydney, Michael Spence, and leaders from our sister institutes (Heart Research Institute and the Woolcock Institute).

The Centenary Institute Bank of Queensland Gender Equity Early Career Award was presented by Bank of Queensland CEO and Managing Director, Mr Jon Sutton to Dr Jodie Ingles for her outstanding work, leading the Clinical Cardiac Genetics Laboratory within the Molecular Cardiology Program at Centenary.

We thank all those who supported and attended the dinner for celebrating the achievements of our scientists over the past year, each of them working hard to understand disease and find cures in the areas of cancer, cardiovascular disease and inflammation.



RECOGNISING INNOVATIVE YOUNG RESEARCHERS



Centenary Institute Medical Innovation Awards are held in memory of Neil Lawrence and recognise Australia's most innovative young researchers who are taking the risks to ask the big questions which have most people saying "that's impossible".

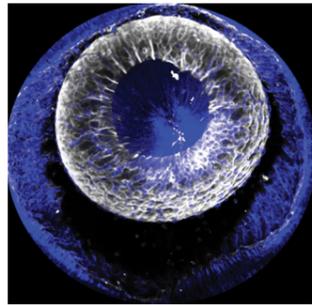
Dr James Hudson from the University of Queensland was awarded first prize for his groundbreaking work, creating human heart tissue from stem cells for cardiac repair. Dr Hudson has found that using regenerated human heart tissue is a powerful tool for drug discovery.

We thank our Awards sponsors Val Morgan, Commonwealth Bank Private and the Lawrence family and acknowledge the support of the Hon. Brad Hazzard MP, NSW Minister for Health and Minister for Medical Research for joining us at the Awards ceremony.



CENTENARY'S ANNUAL SCIENTIFIC IMAGE PRIZE

The annual Centenary Scientific Image Prize sees art and science converge. Our researchers are lucky enough to see beautiful images through the microscope and in their work in the laboratory and this prize gives them an opportunity to capture this beauty and to share it!



This year's winner is Dr Rohit Jain from our Immune Imaging Program, his work of art called "That's how Eye Roll". The composite image highlights blood vessels and surrounding tissue in the developing eye of the embryo. See more images from this year's prize on our website.



TO ALL OUR WONDERFUL SUPPORTERS

YOUR SUPPORT IN 2017

Your generosity makes a world of difference to our researchers! If you are interested in making a donation to a specific area of our research please contact us on 1800 677 977, email us at donations@centenary.org.au, or you can make an online donation and nominate the area at www.centenary.org.au.

Thank you for your ongoing support!

To find out more about our scientists and their latest developments visit our [website](http://www.centenary.org.au)

SUMMER 2017
CENTENARY.ORG.AU

HUMANS OF MEDICAL RESEARCH

2017 BREAKTHROUGHS & MEDIA HIGHLIGHTS

We want to introduce you to our scientists as humans. These are the people who directly benefit from your ongoing support. They are so excited to share their stories with you!

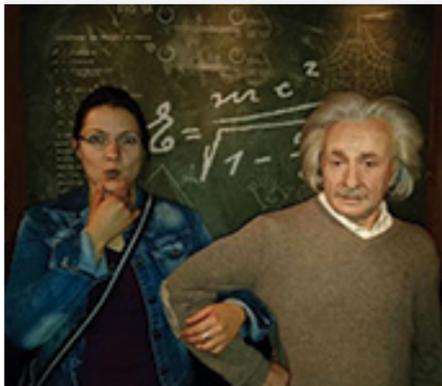
DR RICHARD BAGNALL



Dr Richard Bagnall works with the Molecular Cardiology Program investigating the causes of cardiovascular disease in order to uncover better, more targeted treatments and cures for a disease which is one of Australia's biggest killers.

"Human genetics research is exhilarating. We are in a unique time where it is now possible to read the entire genetic sequence of a person in just six weeks. Every day I learn something new that helps our research into the causes of inherited heart diseases and sudden cardiac death in the young" he says.

Richard is not one to shy away from a challenge, in the lab and outside of it, enjoying participating in 16-kilometer obstacle courses in mud!



DR JODIE INGLES



Dr Jodie Ingles has had quite the year, winning a bounty of awards for her game-changing research in the area of cardiac genetic counselling. Jodie recently won the Centenary Institute Bank of Queensland Gender Equity Early Career Award and the NSW Cardiovascular Research Network Award, adding to an already impressive collection of prizes for her research. Being a young researcher, Jodie is often referred to as a "rising star", but it's fair to say that Jodie has now truly cemented her position as a leading Australian scientist.

Jodie has been working as a cardiac genetic counsellor for the past 14 years and every week sees families with inherited heart conditions and experiencing the loss of a loved one from sudden cardiac death.

DR ANGELINA LAY



Dr Angelina Lay's research focusses on a type of chronic liver disease known as liver fibrosis, characterised by excessive scar tissue as a result of the liver repairing itself after injuries caused by viruses or chemicals.

Angelina's career path is extraordinary. Growing up in East Timor, under the occupation of Indonesian troops, it was too dangerous for her to attend school until she was 12. Her family eventually moved to Australia where Angelina entered grade 11, without knowing any English. That didn't hold Angelina back though, she excelled in her studies and entered a University science degree.

Angelina is now one of our leading researchers, who has had her work published in the prestigious journal, Nature.

DR KRISTINA JAHN

The invention of modern scientific technology such as microscopes, has opened up a whole new dimension in science, from accelerating medical research, improving the quality of our lives to making many daily tasks faster and more efficient.

This is why it is vital that these important pieces of equipment are in optimal working-order. Dr Kristina Jahn ensures that our many high-tech microscopes are operating well and that all staff, including students, know how to use them correctly for their research. Complex equipment often has many components which must all be working in unison. Kristina's favorite part of the job is getting to know everyone at Centenary.

DRUGS IN DEVELOPMENT TO STARVE CANCER CELLS

Revolutionary new cancer therapies for patients suffering with some of the most difficult-to-treat cancers are now being developed following a major discovery led by Associate Professor Jeff Holst, Head of our Origins of Cancer Program. These new and potentially game-changing drugs block metabolic processes critical to cancer cells. Clinical trials are the next phase of this research discovery.

NEW CELL IN THE LIVER DISCOVERED

Centenary scientists, Associate Professor Patrick Bertolino and Associate Professor David Bowen have discovered a never-before identified cell which plays a vital role in preventing harmful microbes from spreading throughout the body by accessing the liver. The study, which details this cell's role in the liver, has been published in the prestigious journal, Immunity.

TESTING DRUG FOR PANCREATIC AND OTHER CANCERS

Professor Jenny Gamble, Head of our Vascular Biology Program and Professor Mathew Vadas AO, Centenary Executive Director, have been working on understanding the function of a single cell, the "guardian" endothelial cell that lines our blood vessels. They have developed a new drug that could be effective in some of the hardest to treat cancers with the highest mortality rates, such as pancreatic and liver cancer.

GUT BACTERIA COULD HOLD KEY TO TREATING AND PREVENTING STROKES

Cerebral cavernous malformations (CCMs) are a relatively common cause of stroke and seizure with no effective medical treatment available. One in six Australians will have a stroke in their lifetime. The game-changing new research led by Dr Xiangjian Zheng, which was published in Nature, has found that gut bacteria could be the key to prevent potentially deadly strokes.

POSSIBLE NEW TARGET IDENTIFIED TO TREAT LIVER FIBROSIS

Researchers led by Associate Professor Mark Gorrell, have revealed exciting evidence of a new target that could be the key to treating liver fibrosis, the potentially deadly accumulation of scar tissue which results from ongoing inflammation and the death of liver cells occurring in most types of chronic liver diseases. In many patients, this process can lead to the need for liver transplants and progress to deadly liver cancer. The research was published in the prestigious publication PLOS ONE.

ONE ENERGY DRINK COULD BE HARMFUL FOR SOME

A world-first study has found that having just one to two energy drinks could be life threatening for some young people with no known history of heart disease. The study, led by Professor Chris Semsarian, found that people born with a genetic cardiac rhythm disorder called Long QT Syndrome, are at higher risk of dangerous heart rhythms or even death after consuming energy drinks. About one in 2000 people has Long QT Syndrome but many are unaware. The study was published in the International Journal of Cardiology.

DISCOVERY OF PATTERN IN GENE REGULATION

Dr Ulf Schmitz and Centenary Institute's Gene and Stem Cell Therapy Program, led by Professor John Rasko AO, have discovered a common pattern in the process of gene regulation in humans, mice, dogs, chickens and zebrafish. Cancer and many other diseases are caused by mistakes in the body's gene regulation process, which can occur when damaged cells do not properly self-regulate. Understanding the process which determines whether or not genes are successfully controlled, is the key to treating and finding cures for cancers and many other diseases.

NEW DRUG LEAD IDENTIFIED IN FIGHT AGAINST TB

Antibacterial compounds found in soil could spell the beginnings of a new treatment for tuberculosis, new research led by Centenary Institute and the University of Sydney has found. Believed by many to be a relic of past centuries, tuberculosis (TB) causes more deaths than any other infectious disease including HIV/AIDS.

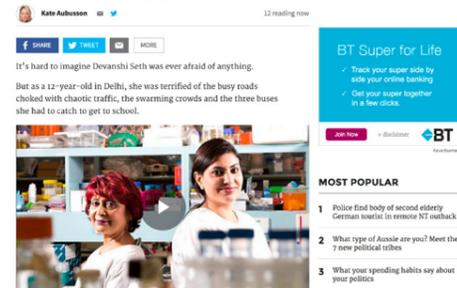
BREAKTHROUGH OFFERS IMPROVEMENT FOR CANCER THERAPIES

Our DNA is like an "encyclopedia". Genes are "paragraphs", separated by spaces, our genes also contain "spacer DNA" known scientifically as "introns". In addition, there are "punctuation marks" introduced by the chemical modification to the DNA. All of these features are important to ensure that messages are conveyed accurately in our cells. Researchers have discovered that naturally occurring chemical modification to the DNA, can change the way information in genes are read. Professor John Rasko AO and Dr Justin Wong from our Gene and Stem Cell Therapy Program found when "punctuation marks" are put at the wrong place, the "spacer DNA" is present at inappropriate sections of the gene. Consequently, the information is "whited out" because the sentences in the "paragraphs" no longer make sense.

Husband and wife research team develop drug to battle pancreatic cancer



Scientists Devanshi Seth and Shweta Tikoo tell how they beat the gender gap in science



Would you like to visit Centenary to see first hand what we do and meet some of our scientists in person? Email us [here](#)