

# HUMANS OF MEDICAL RESEARCH

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 Laboratory which investigates 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.

In a current project, Richard is looking for genetic variants which cause inherited heart disease. He uses high performance computers to analyze large volumes of genetic information. Richard and his team then validate the findings in the laboratory with various practical hands-on techniques.

Richard is truly passionate about his work, "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. The team is finding new ways that genetic variants impact on our health and new genes which cause inherited heart diseases. This research could lead to better treatments and even cures for genetic heart disease.

Richard is not one to shy away from a challenge of any kind- in the lab and outside of it. His methods of relaxing are certainly novel! "This weekend I am participating in a 16-kilometer obstacle course - in mud. I will be forming human pyramids to scale high walls, throwing myself into iced water, wading through chest-deep mud, and trying to avoid electrified wires." Richard believes it's important to stay active when you spend a lot of time at a desk or bench at work.

Something many of his colleagues and friends may not know about Richard is, he used to be a DJ! "To make ends meet as a PhD student, I was a resident DJ at a nightclub in London." Richard is a groovy dad who shares his passions with his kids, "I have two young daughters and both have inherited my love of the natural world. They both enjoy trying to catch bugs or lizards in our garden and exploring the rock pools at Toowoomba bay on the Central Coast."

## 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 she sees families with inherited heart conditions and experiencing the loss of a loved one from sudden cardiac death, "Being able to provide answers to these families guides every aspect of our research. It's often challenging, but we get to be there for families at some of their most difficult times and be a positive force," says Jodie.

Jodie holds a number of roles at Centenary Institute, seeing families in clinics as a cardiac genetic counsellor and overseeing the return of clinical genetic testing results from Centenary's research program. Jodie also leads a group in Centenary's Molecular Cardiology Program, focused on clinical, genetic and psychosocial aspects of inherited heart diseases.

Jodie enjoys the mystery of science and works hard to uncover the life-saving answers. "I love analysing data because it means I'm the first person in the world to know the answer to my research question. I also love looking at a patient's genetic test results, it's like being a detective, building a case to explain the disease in their family."

Jodie clearly works hard in the clinic and she's kept busy on the weekend too, as the mum of an active eight-year-old boy, Jodie usually spends her weekends at various sports activities. Being a mum is another role she loves and of course, excels in.

## 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 life has followed an unusual path to end up researching liver disease. She was born in Timor-Leste (East Timor) and grew up while Timor-Leste was under the occupation of Indonesian troops. During that time not many schools were open and her parents feared sending her out when many East Timorese "disappeared". It wasn't until she was 12 that Angelina went to school for the first time! She recalls being so excited to finally attend school and wear a school uniform.

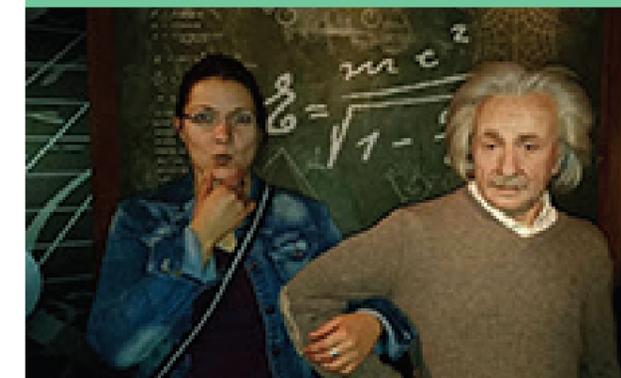
After a few years, things deteriorated in Timor-Leste again, but Angelina was fortunately able to migrate to Australia in her late teens. Starting year 11 with no English was a real struggle; "I had a few friends, but as you can imagine that was tough. I wasn't going to waste this amazing opportunity; I worked hard and got into UNSW studying an advanced science degree."

"My Honours was a great experience, I developed a love for science and decided to pursue a career in medical research. I did my PhD with Professor Philip Hogg. We achieved some great things; our research into a new cancer treatment was published in Nature. Phil was even more excited when he discovered that apparently I am the first female East Timorese with a PhD."

Angelina travelled to the US and took up her first Postdoctoral position at the University of Notre Dame. Eight years, a couple of papers, a husband and a son later, they came back to Sydney, where she was sponsored by the University of Sydney Postdoctoral Fellowship and chose to work with Professor Jenny Gamble in the Centenary Institute.

Angelina is a mum of two adorable kids (12 and 9 years) and her husband is also a fulltime senior scientist. "I love what I do every day, it is challenging but rewarding knowing that my medical research today will help us better understand chronic liver disease and find ways to reduce the impact of liver disease - now the fastest-growing cancer killer in Australia."

## 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. At Centenary, that is the responsibility of Dr Kristina Jahn, who ensures that our many high-tech state-of-the-art 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 is lucky enough to meet every new staff member at Centenary and this is one of the reasons she enjoys her role, "My job is a very social one, because I know what most people in the Institute do, so I can introduce people to one another and help with collaboration across Centenary."

Kristina also teaches new students how to use the microscopes, skills which they will carry throughout scientific careers. They also acquire some creative skills, "It is wonderful for me to teach new honours students how to take images and then have them win an imaging prize or fill their theses with meaningful data."

Outside of work, Kristina enjoys spending time in nature, especially going for long walks. One thing many people at Centenary might not know about Kristina is that she enjoys Rock 'n Roll and Rockabilly dancing! "I love the speed and the rhythm of the music as well as the amazing full circle shirts that fly high when spinning!"

Kristina is always happy to help others, she is one of our brilliant young staff and she has rhythm! You can see why Kristina is a valued and fascinating member of our team at the Centenary Institute.