

# HUMANS OF MEDICAL RESEARCH



## Understanding DISEASE...Finding a CURE

### 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.

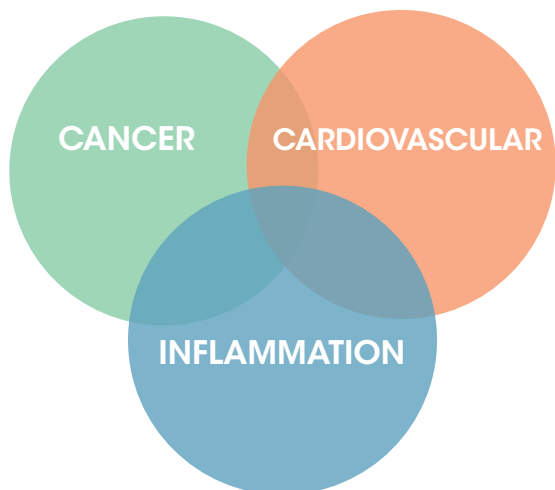
Richard is truly passionate about his work, "Human genetics

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 Toowoona bay on the Central Coast."

### WHAT DOES IT ALL MEAN?



#### CANCER

Cancer is a disease of the cells, which are the body's basic building blocks.

1 in 3 women and 1 in 2 men will be diagnosed with cancer by the age of 85.

#### INFLAMMATION

Inflammation is the body's natural response to protect itself against harm. There are two types: acute and chronic.

1 in 9 Australians have asthma, around 2.5 million people.

#### CARDIOVASCULAR

Cardiovascular Disease (CVD) is a collective term for diseases of the heart and blood vessels.

Almost 1 in 3 deaths in Australia in 2015 were due to cardiovascular disease.

*Together we are the solution...together we can save lives.*



Ask Richard a question here <https://www.centenary.org.au/meet-dr-richard-bagnall/>