



UNIVERSITY OF OTAGO, CHRISTCHURCH

# Newsletter

MAY 2011

CHRISTCHURCH

## CONTENTS

Dean's Welcome

### AWARDS

Heartening research into genes

### RESEARCH

Kiwifruit better than supplements

### TEACHING

Students praised in quake wake

### PEOPLE

Luthiery great stress relief

New Chair in Public Health

## Dean's Welcome

The earthquake of February 22 has had a marked effect on our functioning at the University of Otago, Christchurch. The major school building was damaged and it will be in the latter half of the year until we get full usage of it.

This damage has meant the majority of our annual Health Lecture Series were postponed, including a scheduled talk by Distinguished Research Medal winner, and founder of the Christchurch Health and Development Study, Professor David Fergusson. All the lectures will be rescheduled and we will keep you informed of the new dates.

With disruptions to buildings, a number of our departments, including Public

Health and General Practice, Psychological Medicine, Pathology and the Māori Indigenous Health Institute (MIHI) have been working from temporary accommodation.

Despite these disruptions all our academic services are being delivered to both undergraduate medical students and post-graduate health sciences students.

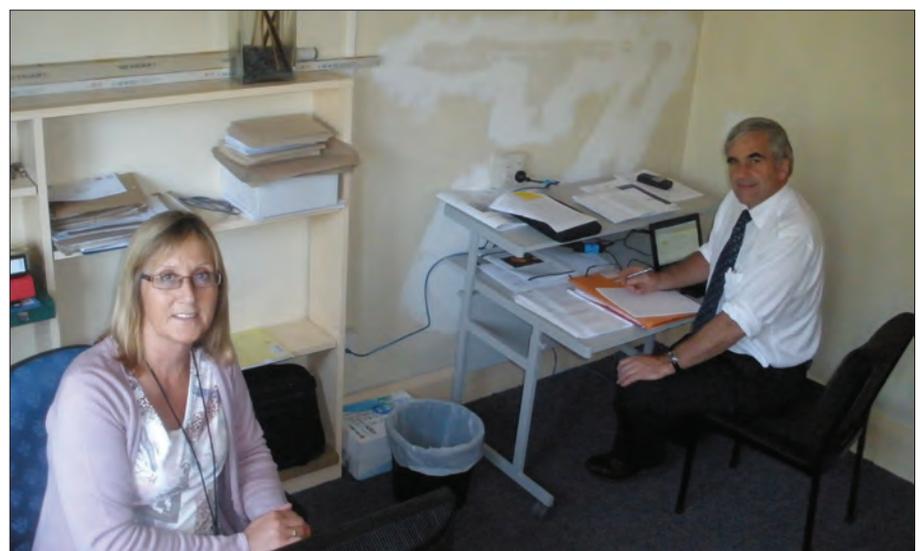
Disruption to research groups has been far greater, but the degree of disruption varies from one group to another.

Due to the earthquake we have delayed the celebration of our 40th Anniversary from February 2012 to Spring 2012.

**Professor Peter Joyce**  
DEAN

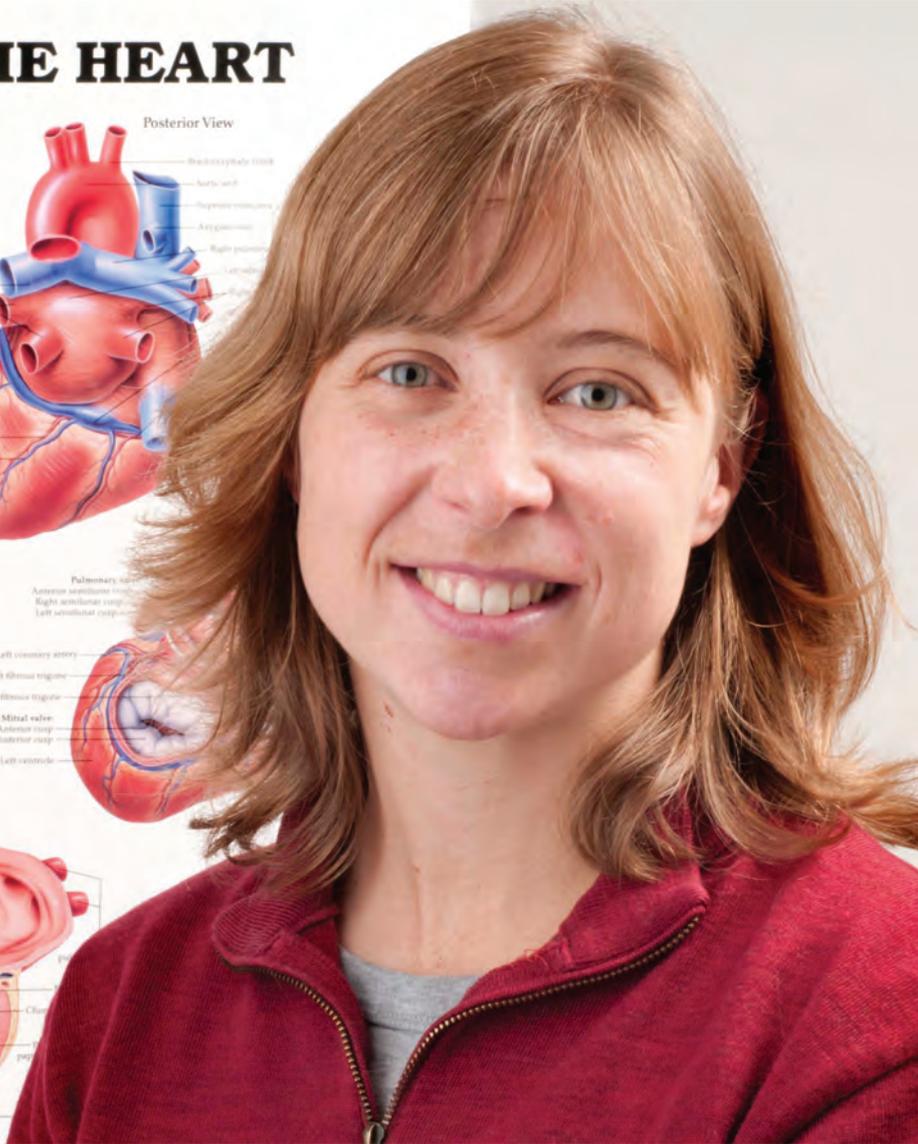
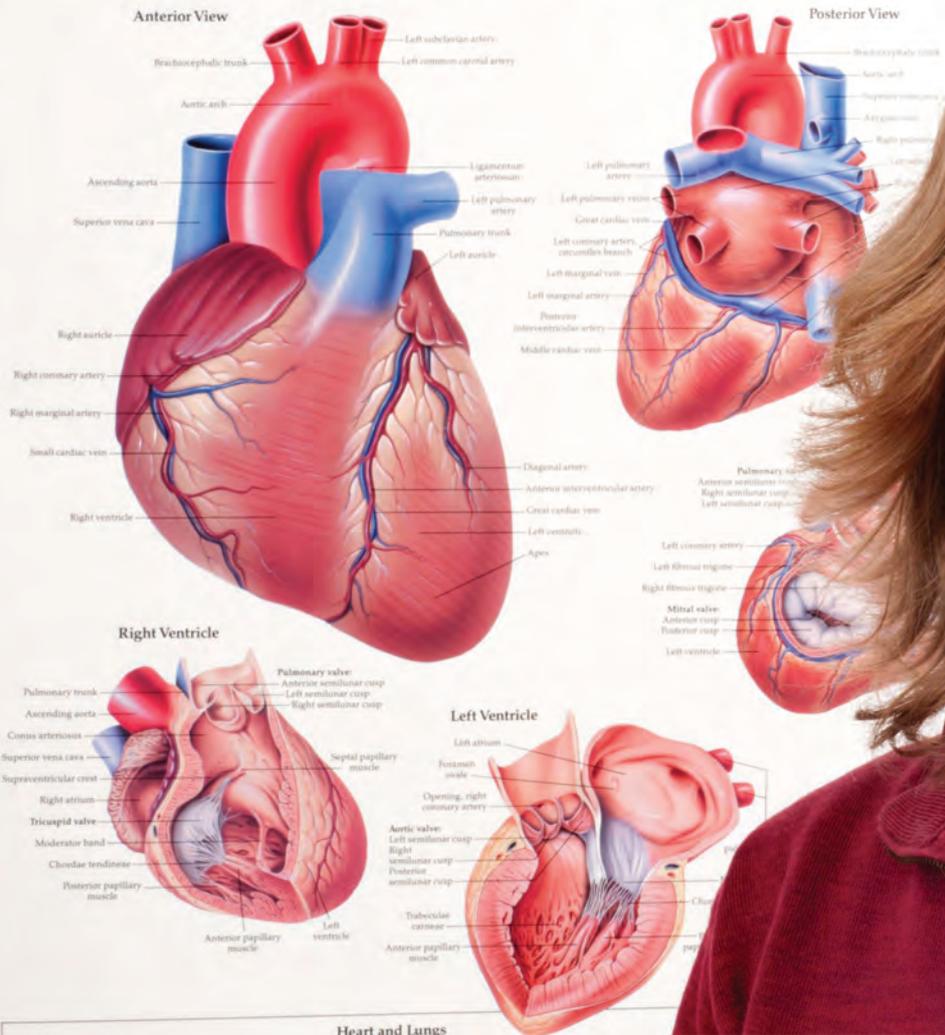
## The Christchurch Experience

40 Years of Research and Teaching  
1973-2012



Dean Professor Peter Joyce and his PA Robyn Maguigan in their temporary office at Cashel Street.

### ANATOMY OF THE HEART



Christchurch researcher Dr Anna Pilbrow has won a prestigious Fellowship for work she hopes will someday help identify people at impending risk of a heart attack.

Although all people have the same genes (30,000 of them), each gene can have very small variations within it (like a single letter changed in the spelling of one word within a sentence). It is these variations that make us all individuals, but in some cases can make us more susceptible to disease.

In recent years scientists have identified ‘genetic hot-spots,’ or regions of the DNA with certain variations, which seem to increase people’s risk of developing heart disease. However little is known about how these genetic variations actually affect a person’s risk of developing the disease.

Anna was recently awarded a Health Research Council Sir Charles Hercus Fellowship to increase understanding in this area.

The Fellowship is given to only a handful of young researchers every year, and guarantees funding for four years.

Anna is looking for differences in the way the heart and blood vessels function, comparing people with the DNA patterns which place them at a higher risk of heart disease, compared to those without heart disease genetic variations.

Anna says her work involves looking at heart samples from a huge bank of donated hearts in America. She will compare findings from the American samples with those from patients in Christchurch, and Cantabrians without heart conditions. Anna says she hopes her work will add to knowledge which in future will help identify those at impending risk of a heart attack.

Her work is also funded by Lotteries Health, the Maurice and Phyllis Paykel Trust and the National Heart Foundation of New Zealand.

# Research

## Kiwifruit better than supplements



People require vitamin C (ascorbate) in all body tissues and organs to be healthy. We cannot make vitamin C so normally get it from certain foods. Vitamin C is also commonly available as a supplement. The question often asked is whether a supplement is as good a source of the vitamin as whole foods, but few studies have addressed this issue.

Associate Professor Margreet Vissers of the University of Otago, Christchurch, recently found that a natural fruit source of vitamin C – kiwifruit – was vastly superior as a source of vitamin C than purified supplement form. In the experiment, vitamin C-deficient mice were fed the vitamin over a month, either as kiwifruit gel or as ascorbate added to their drinking water.

She found that when mice were fed kiwifruit gel, the vitamin C was absorbed into their body stores much more efficiently than when it was given as a purified form in their drinking water. This was a surprising result with important implications for human nutrition. It was published in the American Journal for Clinical Nutrition, the highest ranking journal in this field.

The research was funded by Zespri and the University of Otago.

Margreet says it is possible that some fruits, such as kiwifruit, allow the body to absorb vitamin C more efficiently, and retain it longer. It would be of interest to know whether this happens in people, and an equivalent human trial is currently underway.

# Teaching

## Students praised in quake wake

Christchurch medical students played an important support role in the aftermath of the February 22 quake.

Christchurch Hospital staff even praised them, particularly 6th year students or trainee interns (TIs), for their support during the “hectic” period following the devastating aftershock.

Emergency specialist Dr Mike Ardagh said 6th year medical students from the Christchurch campus of the University of Otago provided “fantastic” support to emergency department (ED) nurses and doctors, who were inundated by patients following the quake.

“Things were pretty hectic. We were losing power, didn’t have working computers or access to laboratory results or X-rays,” Dr Ardagh said.

Students collected X-rays, checked whether staff members needed accommodation and food, and confirmed rosters, he said.

Medical student Felicity Williamson was in the university’s Christchurch building, connected to the hospital, when the quake hit and went to ED to offer help.

“I thought, ‘I can either go home and sit around doing nothing or I can see how I can help,’” Williamson said.

She learnt a lot working in ED in the quake’s aftermath, which was a “once in a lifetime experience”.

“It was great to be part of it and be able to help. Everyone was rolling up their sleeves and pitching in,” she said.



Christchurch Hospital emergency department staff wait for victims of the February 22 quake at a triage station set up in the ambulance bay.

**“Things were pretty hectic. We were losing power, didn’t have working computers or access to laboratory results or x-rays.”**

Professor David Murdoch spends his days running a busy University department and organising research for a project funded by the Bill & Melinda Gates Foundation.

In his spare time David relaxes by making guitars.

The head of the University of Otago, Christchurch's, Pathology Department thought about trying luthiery (guitar-making) in his early 20s but was too busy studying.

A head injury two decades later gave David the time.

"I had a head injury and had to stop work for months. It made me focus on life and what I wanted. I decided to get off my butt and make a guitar like I had always planned."

Since then he has made about a dozen guitars or ukuleles.

He says it is a great 'stress relief' from his busy professional life.

David is a world-renowned pneumonia researcher.

"Pneumonia is the biggest killer of kids in the world. Thankfully there has been a greater focus on research in the area recently."

He is in the process of setting up research programmes in seven developing nations on behalf of the Gates Foundation.

The research will focus on the specific causes of pneumonia in children in each of the seven countries.

This will allow the development of more targeted vaccines and other preventative measures.

David says his interest in infectious diseases consolidated when he spent a couple of years working in Nepal during the middle of his specialist training.

It opened his eyes to the unnecessary illness and death of people from potentially preventable and treatable diseases.

He later trained at specialist tropical medicine and infectious disease units in the United States and Britain.

David joined the University of Otago, Christchurch in 2000. He became Head of the Pathology Department in 2002.

His role involves overseeing research into such diverse areas as free radical biology, breath research and pharmacogenetics.

His own research interests include pneumococcal disease, respiratory tract infections, respiratory viruses, legionella infection and bloodstream infections.



## New Chair in Public Health



On Friday September 3rd 2010, Philip Schluter was offered the position of Chair in Public Health at the University of Otago, Christchurch.

Early the following morning, Christchurch was rocked by a magnitude 7.1 earthquake.

Philip would have been forgiven for politely declining the job and remaining in Auckland.

"I did have to really think about whether to take the position after the earthquake. But there was a real personal and professional opportunity for me in Christchurch which I didn't want to turn down. I thought the September earthquake would be a blip to get over when we first moved to the city."

Philip moved his young family to Christchurch to begin work in early February in the Department of Public Health and General Practice.

Then on February 22, Christchurch was dealt another 6.3 seismic blow.

The aftershock damaged much of the campus where Philip works and forced the already displaced Department's staff to move teaching facilities to a suburban lawn bowling club.

He says the beginning of his new life in Christchurch has been tough – but rewarding.

"It's been impressive to come here and see the resilience of staff and that the students welfare is at the forefront of their mind."

Philip's move to Christchurch has enabled him to indulge more in his hobbies.

He is an avid off-road runner and the 2010 title holder of the gruelling Cape Brett Challenge run.

He is also a keen horse rider.

Philip's specialist areas are in biostatistics and epidemiology.

Over the years Philip has done research on a wide variety of public health topics, with the most recent concentrating on Pacific health.