IT TAKES TWO!

Twins are very special. With only one in 80 Australian births resulting in either identical or fraternal twins, twins are helping QIMR scientists unlock the key to a range of diseases.

Many of the things that affect our health and cause disease are in our genetic makeup when we are born. However many are also due to things that happen through our lives such as diet, exercise, sun exposure, or whether we smoke. Studying identical and non-identical twins helps us to understand the relative importance of genetic and environmental influences on our health.

Professor Nick Martin, Head of QIMR’s Genetic Epidemiology laboratory, said twins have played an important role in projects investigating cancer, migraine and headache, anxiety and depression, eczema, asthma, alcohol and tobacco use, ADHD, endometriosis, weight, glaucoma, reading ability and personality differences.

“We compare the difference between identical and non-identical twins to be able to estimate how much of the variation in a population is due to genes and how much is due to environment.”

QIMR recently played host to Junior Masterchef twins Isabella and Sofia Bliss, who have signed up to help with our research. The girls underwent a series of tests, which included giving blood for genetic screening as part of the twin studies.

Sofia and Isabella’s cooking skills definitely run in the family, with the twins being taught by their Mum, Sylvana, and their maternal grandmother, Rosa. Their paternal great-grandmother, Jean Bliss, was a head cook at Queensland’s Parliament House and they have cousins who have just opened a cafe.

Q-Twin is a registry of identical and non-identical twins, triplets and other multiples of all ages, born in or living in Queensland.

Twins of all ages wanting to take part in QIMR research should visit qtwin.org.au or call 1800 257 179.
A new year signifies change, new opportunities and excitement about the year ahead. In 2012 QIMR enters a new phase of growth and renewal with the completion of our state-of-the-art facilities, linking our two current buildings. As part of the new phase for QIMR, we will be recruiting scientists from around the world. QIMR is dedicated to attracting the best researchers from across the globe to ensure our research continues to be at the cutting edge and ultimately provide better diagnosis, prevention and treatment options.

On the eve of this exciting new era, I’d like to take this opportunity to acknowledge that we couldn’t continue our work without your support, the support of the business community and the wider community. QIMR’s new building has been made a reality thanks to The Atlantic Philanthropies (AP), the Queensland and Australian Governments and you. This support has allowed us to design and construct our new building to provide the best facilities for our scientists so they can make the discoveries that improve the lives of you and your families.

AP have supported QIMR for more than 10 years, not only assisting with the construction of the Clive Berghofer Cancer Research Centre which opened in 2001, but supporting several pioneering medical research projects including a grant for cellular therapies to treat cancer.

AP’s founder, Mr Chuck Feeney, is a well-known philanthropist and advocate for the ‘giving while living’ philosophy, encouraging individuals and families to pledge their support or assets for their chosen causes during their lifetime. Mr Feeney strongly believes that those who are able should use their wealth to help people.

While we appreciate the financial support we receive from our donors and organizations such as AP, money isn’t the only type of help we require. QIMR carries out many types of research and we often need support in the form of your time to help us do this.

When you think of the medicines you buy at the pharmacy, you might be surprised to learn that it can take more than 15 years and more than $1 billion for that particular treatment to reach the shelf. The research we do at QIMR can also take many years to carry out and often requires the help of many volunteers.

From conducting clinical trials, taking samples of blood, doing surveys or looking at facial expressions to create mental health diagnostics, so many of our research projects have been possible because of the assistance of kind members of the community who have been willing to offer their time.

So while popular new year’s resolutions might include improving your diet, reading more and helping a charity, you may like to consider supporting QIMR. Every little bit helps and we couldn’t continue our research without your help.

Professor Frank Gannon
Director - QIMR
CMV - Solving the immunity mystery

QIMR researchers are investigating a common virus that may reduce our ability to fight infection as we age.

Professor Rajiv Khanna and his team from QIMR’s Tumour Immunology Laboratory are investigating the impact of cytomegalovirus (CMV) on the body and its immune system.

“CMV can be with you your entire life and have little effect, but we are keen to know if having this virus could be the difference between reaching your 75th birthday or making it well into your 80s,” Professor Khanna said.

“Many people don’t even know about CMV. We believe having the virus can have a significant impact on your immune system as you age and can tire the body’s immune system, possibly leaving you susceptible to other infections as well.

“CMV can affect between 50-80% of the population and presents as mild flu-like symptoms.

“CMV exists in such a large percentage of the population, so my team and I are keen to better understand the virus and the long-term health implications of CMV infection.

“We are looking for healthy male and female volunteers of any age, but in particular over the age of 60, to give us a small sample of blood.

“We will then be looking at the participant’s blood sample to better understand the impact of CMV on the immune system and their ability to control other infections and respond to common vaccines such as the seasonal flu vaccination.”

Professor Khanna said that with Australia’s ageing population and ever-increasing life-expectancy, long-term wellbeing and health is an important factor in maintaining quality of life.

“Of course we are all ageing, but Australia has and will have a large population over the age of 65 in coming years. It is therefore a priority to keep people healthy for as long as possible to ensure we are able to live a fulfilling and active life well into our twilight years,” Professor Khanna said.

To participate in Professor Khanna’s research or find out more, please contact (07) 3362 0412.

“We believe having the virus can have a significant impact on your immune system as you age and can tire the body’s immune system, possibly leaving you susceptible to other infections as well.”
Researchers at the Queensland Institute of Medical Research (QIMR) will be testing new malaria drugs and vaccines using human volunteers infected with a very small controlled dose of malaria parasites.

Lead physician and QIMR researcher Professor James McCarthy said new ways are urgently needed to test emerging drugs and vaccines that have the potential to treat malaria, a disease responsible for up to a million deaths per year throughout the world.

“While many new drugs and vaccines are being developed it is very difficult to determine which are the best ones to take to field testing in areas impacted by malaria,” Professor McCarthy said.

“This clinical trial will investigate the efficacy of anti-malarial drugs and vaccines by trying them in human volunteers whom we infected with a low dose of malaria parasites.

“We will also be closely analysing the immune response to measure the efficacy of these treatments.”

The research requires volunteers who will receive an injection containing a very low dose of malaria parasites (Plasmodium falciparum).

“Undertaking this trial is a way for people to make a difference to the lives of millions and participants will be closely monitored and very well cared for,” Professor McCarthy said.

“Participants will receive only 150 parasites from a controlled sample we have developed. This is actually less than a 200th of the amount that reaches the blood when someone catches malaria from a mosquito.

“The volunteers will then be closely monitored using a very sensitive test we developed that measures the DNA of malaria parasites in the blood. This allows us to treat the volunteers with antimalarial drugs before they become sick.

“Our volunteers will finish the trial without a trace of malaria in their body.”

This study is being conducted at Q-Pharm Pty Limited. It has been approved by QIMR’s Human Research Ethics Committee.

Anyone interested in volunteering for the study can contact Q-Pharm on 1300 QPHARM (1300 774 276). Volunteers will be reimbursed for their time and closely monitored throughout the treatment.
Breakthrough in malaria research looks to body’s immune cells

Groundbreaking research from QIMR is set to pave the way for the development of new malaria drugs and vaccines.

Dr Michelle Wykes and her team have recently published new findings demonstrating how the malaria parasite can survive in a type of white blood cell in the spleen.

Dr Wykes’ research, undertaken over several years, provides a major breakthrough in our understanding of the malaria parasites.

Traditionally, it was believed the parasite’s development in the body was restricted to the liver and red blood cells.

The findings have opened up a whole new approach to developing drugs and vaccines targeting the infection in the spleen.

“Our research has discovered how white blood cells called dendritic cells, malfunction and shield the malaria parasite from the body’s immune attack,” Dr Wykes said.

“Dendritic cells normally function like generals of an army, giving orders to the body’s immune cells to fight infection.

“The system usually works brilliantly. However, the problem with malaria is that the disease has found a way to block dendritic cells from doing their work, meaning that the disease overrides our immune responses. And therefore, people get sick.”

Dr Wykes was awarded a $300,000 Queensland Government Smart State fellowship in 2010 to assist her research.

“The fellowship has enabled me to progress my research and without it I wouldn’t have been able to deliver these new findings which are a major step in fighting the global problem of malaria,” Dr Wykes said.

QIMR is a partner in the Queensland Tropical Health Alliance (QTHA) with James Cook University, the Queensland University of Technology and Griffith University, with the aim of improving the detection, diagnosis and treatment of tropical diseases.
Hitting a nerve

Unfortunately, Australia is the skin cancer capital of the world with an estimated 500,000 Australians diagnosed with non-melanoma skin cancer per year.

This is a significant burden on the Australian health care system, resulting in over 950,000 medical appointments and $300 million in costs each year. There is also the human cost, with people having to undergo repeated treatments and approximately 80 people losing their battle with these cancers in Queensland each year. Of these half a million people, 20% are diagnosed with squamous cell carcinoma (SCC).

Dr Glen Boyle from QIMR’s Drug Discovery group has secured a fellowship from Perpetual’s John Thomas Wilson Trust to carry out research to ultimately improve the prognosis and treatment of a particular type of SCC.

“Cutaneous SCCs of the head and neck are extremely common in Queensland and account for 90% of all SCCs,” Dr Boyle said.

“Many people believe SCCs are relatively harmless skin cancers that can be burned off the skin, however there is a particular type of cutaneous SCC tumour that has the ability to invade nerves that affects around 3-7% of SCC sufferers.

“The SCC tumours that attack nerves (perineural invasion) are associated with a much poorer prognosis for patients, which is why I am interested in better understanding these aggressive tumours.”

For the past 12 years Dr Boyle has been investigating the molecular development of head and neck and cutaneous squamous cell carcinoma and melanoma.

“In this current project I am aiming to identify the molecular changes that lead towards perineural invasion, in the hope of finding markers to allow for better diagnosis and potentially treatment,” Dr Boyle said.

“By understanding and identifying these molecular changes, it would allow the identification of patients with a high risk for perineural invasion, allowing aggressive treatment to prevent the tumour from invading the nerves.”

Perpetual’s Andrew Thomas said that through John Wilson’s generosity, Glen’s research will be supported for four years.

“Ultimately we all hope Glen’s work will improve the health outcomes for anyone of us who could be diagnosed with a cutaneous SCC tumour,” said Mr Thomas.

The project will also assess new drugs for treatment of perineural invasion.

Since our partnership commenced in 2004, Suncorp has strongly supported QIMR skin cancer research through a number of fundraising initiatives.

Suncorp is committed to helping make protection from the sun part of our way of life.

For further information about the SunWise program visit www.suncorp.com.au/sunwise
Mystery and a lack of understanding surround ovarian cancer, but a team from QIMR will soon commence a study to understand this devastating disease better.

Associate Professor Penny Webb from QIMR’s Gynaecological Cancer Group has been awarded a National Health and Medical Research Council (NHMRC) project grant worth over $1.7 million to conduct the first comprehensive study of lifestyle factors that might improve survival for women with ovarian cancer.

“More than 1,200 Australian women are affected by ovarian cancer each year and the survival rates are quite poor,” Dr Webb said.

“With only 40% of women diagnosed with ovarian cancer surviving more than five years, women understandably want to know if there is anything they can do to help ensure they are one of the survivors. At the moment, the only answer is that we don’t know.

“From April 2012, my team and I will be carrying out the Ovarian Cancer Prognosis and Lifestyle (OPAL) study.

“Our aim is to interview more than 1000 women who have recently been diagnosed with ovarian cancer, to get a better understanding of how a woman’s lifestyle might influence her quality of life and, ultimately, survival.

“By doing this study we hope to be able to give women reliable advice, for the first time, regarding lifestyle changes that might improve their chances of beating this devastating disease.”

The OPAL study builds on QIMR’s strong involvement with ovarian cancer, including the recently conducted Australian Ovarian Cancer Study (AOCS) which, among other things, looked at the diagnosis experience of over 1,500 women.

“Ovarian cancer is sometimes referred to as the ‘whispering’ killer because the symptoms are very common and not specific for ovarian cancer,” Dr Webb said.

“Up to 75% of women diagnosed are in the later stages of the disease and it is commonly thought that this is because the diagnosis is often missed.

“To address this, we looked at the pathways women travelled from GPs to specialists and surgeons before being diagnosed with ovarian cancer and found that, in most cases, the disease is diagnosed fairly quickly and only a small proportion of women report a long delay. We also found that women whose cancers were diagnosed more slowly did not have more advanced disease than those who were diagnosed quickly.

“With so many unknowns about ovarian cancer, studies such as OPAL are essential to increase our knowledge and will hopefully mean that fewer women will die from ovarian cancer in the future.”
In August 2011, Vicki Gardner suggested holding a family fundraiser to honour her late father Mervyn Peatey.

Vicki, along with her two sisters Brooke Watson and Kim Swinbourne and their mother, Lesley Peatey set off to organise a backyard fundraising evening.

What began as a small fundraiser with family and friends transformed to 125 people attending a fundraising gala evening in November 2011.

The Peatey family were dedicated to making a real difference and worked hard to approach many businesses and friends which resulted in more than 150 donated items to raffle and auction.

Along with some generous financial donations, the family raised an outstanding amount, over $14,700.

The Peatey family were touched by the generosity of support they received and feel very proud to know the funds raised in honour of their father will help others.

In March 2010, Mervyn was tragically diagnosed with a Glioblastoma Multiforme. Glioblastoma is the most common and aggressive form of primary brain cancer and despite considerable progress in cancer research, for most patients diagnosed there is currently no cure or long term survival. Mervyn underwent a biopsy, radiation and chemotherapy, however he sadly passed away in November 2010.

QIMR is so grateful for their outstanding efforts to raise vital funds for our Glioblastoma research. QIMR's Professor Andrew Boyd is working to develop new therapeutic strategies to tackle the cancer from all angles; boosting the immune system; searching for genetic information; and sifting through new compounds for treatments.
Cancer campaigner to ride around Australia

Ron McLaughlin is planning to travel to the furthest points of Australia to raise money for QIMR’s cancer research. After losing both his father and brother to cancer in the same year, Ron was determined to raise money and awareness by riding his Harley Davidson around the country.

Mr McLaughlin will leave in August 2012 from Springwood, Queensland and will complete the fundraising trip in eight weeks.

“I always had the idea to go around Australia. But it was my dealings with people who were going through cancer treatment, family and friends that got me motivated,” he said.

The stress of losing his brother and father caused Ron to become very sick and he realised he could not put off the trip any longer.

Ron aims to raise $20,000 for QIMR’s crucial work into improving the treatments, prevention and diagnosis of cancer. He has already got off to a great start with over $4,400 raised through generous donations from the community and several sausage sizzle fundraisers at Gasoline Alley, Springwood.

“I’ve already had so much support from friends and businesses, but every little bit helps, so all donations are welcome.”

To support Ron McLaughlin’s ride around Australia and to keep updated with his travels later this year please visit www.everydayhero.com.au/ron_mclaughlin
Rita McMillan had breast cancer in her late 70s and had one breast removed. She lived for another 20 years after her surgery and saw the progress that was made thanks to medical research. Rita and her family often discussed her desire to help other women suffering from cancer.

After Rita passed away, her great nephew Norm presented a cheque for $56,000 from Rita to go towards breast cancer research at QIMR.

“It was her way to leave a legacy. She wasn’t really in a position to donate during her lifetime, but she always wanted to help prevent others from going through what she went through,” said Norm.

“I think it is wonderful, as it also encourages other people to think about how they can help improve everyone’s future by supporting medical research.”

QIMR would like to thank Rita for her dedication to advancing science.

Rita Agnes McMillan
1917—2010
The QIMR Ambassador Awards were created to recognise outstanding individuals who are committed to the advancement of medical research and who have been supporters of QIMR for many years.

These unsung heroes demonstrate tremendous community spirit and inspire others to make a positive difference to the world:

• Mr Brian Henson, Mr Kelvin Thomas and Mr Ian Reid all from Hornibrook Buslines.
• Mr Albert and Mrs Diane Budworth from the All British Classic Car Club.
• Mr Michael and Mrs Beryl Ward who have been supporters for almost 10 years.

PICTURED:
(Top left) QIMR Director Professor Frank Gannon congratulates new Ambassadors Michael and Beryl Ward.
(Bottom left) 2011 QIMR Ambassadors (left to right) Mr Brian Henson, Mr Ian Reid, Professor Gannon, Mrs Diane Budworth and Mr Albert Budworth.
(Bottom right) QIMR Ambassador Mr Rupert McCall and long time supporter and Ambassador Ms Denise Schellbach at the annual Thank You High Tea.
Donate today
YES! I would like to support QIMR

Your details
- Mr  Mrs  Miss  Ms  Other: ____________________________
- Name: ____________________________________________
- Address: __________________________________________
- Suburb: ____________________________ Postcode: _______
- Phone: ____________________________________________
- Email: ____________________________________________

Donation amount
- $20  $35  $50  $100  Other: $ _______________________
- All donations over $2 are tax deductible.
- I have enclosed a cheque payable to QIMR  OR
- Charge my:  □ Visa  □ Mastercard  □ AMEX  □ Diners
- Card # ____________________________
- Card holder’s name: ____________________________________________
- Expiry date: _______/_____
- Card holder’s signature: ____________________________________________

I would like to make a regular donation
- Please deduct a monthly donation of $ _______________________
  from my credit card until I advise otherwise.
- Signature: ____________________________________________

To arrange a regular direct debit from your bank account, please call 1800 993 000 to request a form.

Would you like further information?
- I am considering providing for QIMR in my Will – please send me information.
- I would like to take a free tour of QIMR.

Public forums and upcoming events

In 2012, we will be offering the opportunity for all members of the community to join us and hear about the exciting research taking place right here in Brisbane at QIMR.

Malaria and Mossies
- 23 APRIL, 6.15pm for a 6.30pm start
- Long Tan Room, Kedron Wavell Services Club, 375 Hamilton Road, Chermside South

Cancer
- 1 AUGUST, 5.30pm for a 6pm start
- QIMR, 300 Herston Road, Herston

Ageing and Mental Health
- 10 OCTOBER, 10am for 10:30am start
- QIMR, 300 Herston Road, Herston

To book a seat in one of our Public Forums or to book a free tour of the Institute, please call 1800 993 000 or email enquiries@qimr.edu.au

Please post this form (no stamp required) to:
Queensland Institute of Medical Research
Reply Paid 70885
ROYAL BRISBANE HOSPITAL QLD 4029
A receipt will be sent to you shortly.

Thank you
Your generosity is appreciated

Want to keep up to date with the latest at QIMR?
Like our Facebook page: QIMR Australia