Medical mystery solved

Having spent years in and out of hospital, Katie had almost given up hope of ever being well.

“It was very confusing and daunting... seeing doctor after doctor and hearing them say ‘We don’t know what is wrong’, ‘We don’t know why you are so sick’,” said Katie.

Dr Maher Gandhi, head of QIMR’s Clinical Immunohaemotology Laboratory was asked to tackle this difficult case. “Katie presented with a range of symptoms when she was 11. No one could identify her condition. She did not respond to regular treatments,” said Dr Gandhi. Katie contracted infections that would not usually cause problems for a healthy young woman. These infections would come back again and again.

The real serious problems began at the age of 16-17, when Katie contracted a virus that causes glandular fever, which usually causes fatigue that lasts about three weeks. Instead, Katie developed a full-blown version known as fulminant infectious mononucleosis (FIM). This is an incredibly rare, deadly disease that appears as a fever, enlarged spleen and lowered blood cell levels.

Dr Gandhi finally discovered that the signals in Katie’s immune system were not functioning normally. This meant her immune cells could not communicate with each other. “I couldn’t believe the results I was getting. I repeated the results several times, and we thought there was some sort of error. They didn’t match up to any disease I’d seen before,” said Dr Gandhi. “We had to design our own assays to try to determine the problem with Katie’s immune system.”

The only treatment was to replace her immune system. “With no other options, we contacted Dr Glen Kennedy, an expert in bone marrow stem cell transplantation at the Royal Brisbane Hospital, to see if this might offer a cure. The transplant was dangerous, but the results were amazing. The defect in Katie’s immune cells is fixed,” said Dr Gandhi.

Katie is now enjoying living her life as a normal 23-year-old. “I am now back to full time study and loving it. Dr Gandhi was the only one to shed light on the reason for my illness. It was so great to have someone devote so much time and energy to trying to find a cure,” said Katie.
This will be my last message as Director as I will be returning to my research on a full time basis at the end of June. There have been many highlights in my time as QIMR Director, but the ones that stand out the most are the establishment of the Indigenous Health Research Program, the Australian Centre for Vaccine Development, the new Division of Mental Health Research and the Institute’s successful education program which is inspiring the scientists of tomorrow.

It has been an honour to have been Director of QIMR for the past 10 years. I would like to thank the dedicated researchers, administration and general staff and students whom I have had the privilege of working with – I look forward to continuing to work with many of them in the laboratory. I would also like to thank QIMR’s Council and Trust for their support.

To each and every one of our donors I extend a very special thank you and ask that you continue to support this exceptional research facility. Only with the help of medical research can we hope to further improve our health and we can all play a part in this journey.

Michael Good, AO

QIMR researchers working with international colleagues have found that a gene that is most commonly associated with skin pigmentation, hair and eye colour may influence a patient’s chances of surviving cancer.

According to QIMR’s Professor Georgia Chenevix-Trench, “The variant of the gene is only a single change in the genetic sequence, but seems to have quite an impact.

Our research focused on a specific type of breast cancer, estrogen receptor negative breast cancer.

Among these patients, those with the less common variation had a predicted survival rate of 83% at 10 years, compared to the common variant, which we found had a predicted 60% survival after 10 years.

This kind of fundamental research is vital to understanding cancer and providing effective cancer treatments.

Traditional ways of predicting survival and treatment response in cancer patients are not always successful or accurate. Our research aims to find new factors that can account for patients who have a better or worse outcome than expected.

“Understanding these factors may lead to better prediction of survival...”

Professor Georgia Chenevix-Trench

“Understanding these factors may lead to better prediction of survival and hopefully, improved treatment options for individuals,” said Professor Chenevix-Trench.
QIMR scientists have identified a new link between strong period pain experienced in adolescence and early adulthood and the risk of endometriosis.

Researchers from the Gynaecological Cancer Laboratory have found having strong period pain often at an early age doubles a woman’s risk of developing endometriosis.

The study also found that girls starting their menstrual cycle after 14 years old had a significantly decreased risk of endometriosis.

“Although the relationship between menstrual characteristics and endometriosis has been studied extensively, most research has focused on the recent menstrual cycle characteristics of women with the disease. Our research is one of the first studies to look at the factors contributing to the development of endometriosis long before symptoms and diagnosis occur,” said Dr Christina Nagle from QIMR.

In a related study last year, Dr Nagle and her team found that being overweight at 10 years of age also doubles the risk of developing endometriosis in later life.

“Our research aims to better understand the signs and symptoms before the disease develops and to help identify women at higher risk. Early intervention will result in better health outcomes for women with this condition.”

To date, there is no known cause or cure for endometriosis, which affects 10% of women, causing severe pain and reduced fertility in many cases. Disease symptoms can be managed through pain medication, hormone treatment or surgery, or a combination.

**Endometriosis facts:**

- Endometriosis is a condition where the endometrial cells (cells that form the lining of the uterus) begin growing elsewhere in the body. The misplaced tissue implants itself onto the surface of the tissue or organ where it has been deposited and begins to grow and function.
- Affects around 10% of women of reproductive age.
- Reduces female fertility, which may be one of the first signs of the disease.
- Has significant impact on the physical, mental and social wellbeing of women.
- Has possible genetic links.
- Surgery and pain management are currently the only treatments for endometriosis. There is no cure.
- Endometriosis is very difficult to diagnose, because the symptoms are not well understood and vary from one case to another. The condition is known to be associated with severe period pain and infertility. Some women may not have any symptoms at all.
Professor Peter Visscher who heads QIMR's Queensland Statistical Genetics Laboratory has been elected into the Australian Academy of Science (AAS) for excellence in genetics research.

One of only 17 scientists elected this year, Professor Visscher received the prestigious Fellowship on 24 March.

Election to the Academy recognises a career that has significantly advanced, and continues to advance, the world's scientific knowledge.

Professor Visscher is honoured to be elected an AAS Fellow. “Peer recognition is one of the most satisfying rewards for scientists, and my election as Fellow of the Australian Academy of Science is probably the ultimate form of peer recognition in Australia.

I am delighted with the award, which came soon after my migration to Australia and QIMR in 2005.”

The Fellowship acknowledges Professor Visscher’s research into understanding genetic variation within populations, including studying the genetic basis of common diseases that have many genes affecting the outcome.

Professor Visscher attributes the Fellowship to the hard work of his team. “It is a reflection on the fantastic bunch of people that I have had the pleasure and privilege of working with in the past and present.

It is great to note that QIMR now has three Fellows amongst its staff.”

2010 AAS Fellows come from a variety of specialities including disease control using an insect parasite, conservation planning, high energy astrophysics, digital signals engineering and wireless communication, mitochondrial physiology and the physics of diamond.

Peter Visscher is a Senior Principal Research Fellow (SPRF) at QIMR, and holds an honorary professorship with the Institute for Molecular Bioscience at the University of Queensland.

High school lecture series a big hit with students

QIMR’s biannual High School Lecture Series are held every April and October, bringing together year 11 and 12 science students from all around Brisbane.

The recent series was held 20-22 April and included 825 students from 35 schools. The students were keen to learn about how fat causes cancer, how the thyroid affects your IQ, and why vaccination is essential for disease prevention.

QIMR’s Education Program aims to link the students’ curriculum to real-world public health issues; to inspire the scientists of tomorrow to become a part of essential medical research, and work towards improving the health of future generations.

For more information about our education program visit our website www.qimr.edu.au or phone our Education Coordinator on 07 3362 0307.
Ambassador badge awarded to Ailsa Zinns

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. We see these people as “unsung heroes” who demonstrate tremendous community spirit and who also inspire others to make a positive difference to the world.

Long time supporter Mrs Ailsa Zinns was awarded a QIMR ambassador badge in 2009. Ailsa has had a remarkable life and has seen an amazing amount of change – particularly in the world of medical research. Born in 1928, Ailsa grew up on a grazing property near Moss Vale NSW. It was at boarding school that she discovered science which became a lifelong interest. She would have loved to do medicine, but her father (born in 1880) said “Ladies are not surgeons” and that was that!! A distinguished career as an accountant was the alternative, with highlights including working for Ansett in the Northern Territory. Whilst working at the Joint Defence Research Facility (Pine Gap) she met and married Joseph Zinns, an aerospace engineer from the USA. They had 18 wonderful years together before his death in 1987, just after they retired.

“After Joe’s death I carried on building the home we had planned, being involved in the community and supporting charities. I have survived breast cancer and in the same year I had meningococcal disease (DREADFUL!). These days at 81 the old body is wearing out, but I still have my motto of “life to be lived”. I am privileged to support QIMR”. Ailsa Zinns.

Congratulations and thank you to our other 2009 ambassadors: Mrs Norma Schwarz, Ms Robyn Bailey, Mr Bob Rice, Ms Joy Fear and Mr Don Johnsson.

Sunshine Coast couple leave a powerful legacy to QIMR

A Sunshine Coast couple have left the bulk of their estate to fund medical research into the causes and cures of cancer. Mr William Chenhall and Mrs Hilde Chenhall wanted to leave a legacy, and so set up a trust to ensure their money would make a difference to the health of future generations.

Sadly Mr Chenhall died of lung cancer in February, 2005; his beloved wife Hilde the year after, also from cancer. The William and Hilde Chenhall Research Trust has been established to fund medical research into the causes of cancer, with the ultimate aim being to find a cure.

“This Trust will help support a new Bioinformatics Unit at QIMR.

This “super” computer facility will bring QIMR researchers a step closer to understanding the underlying genetic causes of cancer. The facility will allow scientists to identify genes that are involved with a range of cancers and hopefully lead to potential targets for new diagnostics and treatments,” said Professor Good.

One of the Trustees, Cooroy solicitor Mr Paul Bone said he hoped the announcement would encourage other people throughout Queensland to seriously consider a bequest of part of their estate to cancer research.

“With cancer affecting so many Australians - 1 in 3 men and 1 in 4 women before the age of 75 - this funding will improve the lives of so many.” said Mr Bone.

“Both Bill and Hilde had seen the other suffer from this terrible disease, and were very clear in their intention to use their fortune to assist in the funding of leading edge research into cancer. I think Bill and Hilde would be very pleased to see what their money is achieving with QIMR”. ■
Fundraising events at QIMR

Presenting a musical evening with friends

The South-East Queensland Independent Dramatic & Musical Society (SQUIDS) invites you to a musical evening on Saturday 22 May commencing at 7pm. Guests will be entertained by songs from musicals such as Les Miserables, The Mikado, Annie Get Your Gun and much more!

The musical event will be held at the Burnie Brae Centre, 60 Kuran Street Chermside and proudly supports QIMR. Tickets are $15 for adults and $10 for students and concession.

To book your tickets please contact organiser, Deanne Scanlan on 0411 682 577.

Great Gatsby Picnic

The Queensland Vintage Vehicle Association is again hosting The Great Gatsby Picnic which raises vital funds for QIMR.

This year the event will be held on Sunday 19 September on the Redcliffe Parade Foreshore at Suttons Beach, commencing at 10am. For those who have never attended The Great Gatsby Picnic, you and your friends are encouraged to dress up in your most attractive outfits befitting the Great Gatsby era of the 1920s, get out your best chinaware and set up a classic Gatsby picnic under your gazebo or on a rug.

Prizes for best dressed, best picnic setup and games and a jazz band will certainly make this day a worthwhile one to take part in! Pre-1945 cars are also allowed with picnic set ups.

If you are interested in coming to the Great Gatsby Picnic you will need to register by contacting Mr Graham Porter on 07 3206 1812 or 0407 257 440. Picnic and vehicle spaces are limited so don’t delay!

The Vintage Vehicle Association have kindly supported QIMR since 2002 and we gratefully appreciate all the time and effort their committee put into producing this fantastic fundraising event.

Thank you to Tattersall’s Club Brisbane

Brisbane’s historic Tattersall’s Club located in the heart of the Brisbane CBD, has been supporting QIMR in many ways since 2003.

Each year they hold several Sportman’s Grill nights to raise funds. They donate luxury Tattersall’s accommodation packages for raffle prizes. They provide us with advertising space in The Tattler (Tattersall’s quarterly publication) and they also warmly open their doors to the Institute and host special functions when required.

We would like to thank Tattersall’s very much for their ongoing support and friendship.
Father’s memory drives successful golf day

Leigh-Anne Townsley organised a charity golf day in memory of her late father Greg Vogler and raised funds for cancer research at QIMR. Mr Vogler sadly died from bowel cancer after a three year battle. The popular Brassall resident played golf every weekend and was well known in the family business CJ Vogler and Sons in Ipswich.

Some 21 teams played in the event and raised $4,500. Leigh-Anne would like to thank the local community, their close friends, family, customers and suppliers for their support. Thank you also to the many people who donated generous prizes for the raffle and auction on the day, in particular The Hobby Headquarters - www.hhq.com.au

Queensland VMOs help to keep Alzheimer’s research alive

QIMR’s Dr Corinne Lendon is a passionate and gifted scientist. For the last 20 years, she has devoted her career to researching Alzheimer’s Disease (AD) in Australia and also the USA and the UK.

“Alzheimer’s robs the old and wise of their chance to enjoy their retirement and to use their knowledge to improve society” said Dr Lendon. “It is in epidemic proportions, yet because it kills slowly it doesn’t gain much attention. AD destroys the mind and reduces patients to being like infants, they and their families suffer so much that their passing is sometimes seen as a welcome relief”.

Figures released in the latest Access Economics Report show that 1,000 new cases of AD are diagnosed in Australia each week. The incidence doubles every five years after the age of 60 and 40% of all 85 year olds in Australia have the illness. Alzheimer’s is the third most expensive disease to treat as it takes a huge workforce to look after patients, it is very labour intensive and care is required for extended periods – often years.

The cause of AD is not known, but it is associated with an inflammatory response and a build-up of proteins in brain lesions called plaques and tangles. These lesions disrupt normal brain function by killing brain cells and interfering with the connections between brain cells.

The importance of Dr Lendon’s work cannot be under-estimated and yet it almost ground to a halt. Late last year, Dr Lendon was facing major funding problems and looked set to be forced to walk away from her life’s work. But thanks to the generous support of Queensland Visiting Medical Officers (VMOs), people suffering from AD have been offered fresh hope.

Chairman of the VMO Committee Dr Ross Cartmill said “We were inspired by Corinne’s work and the results she and her team were achieving. We saw it as an important area that we should wholeheartedly support”.

The VMO Committee raises funds by salary sacrificing through Queensland Health and have contributed over $265,000 to QIMR.

Annual golf day raises funds

Thank you to the wonderful ladies from the Toowoomba Golf Club who have been raising money for QIMR for nine years!

They hold an annual golf day at the stunning Middle Park Golf Course with the help of their loyal major sponsor Forbes Batteries (www.forbesbatteries.com).

Old Rockers swing for medical research

A dinki-di Rock ‘n’ Roll event was held again this year at Riverside Receptions to raise funds for medical research. Many thanks to Vance and Toni Lendich from the Doghouse Studios for organising this much loved event that features genuine Brisbane bands and players from the 50s, 60s and early 70s.

Thank you Spiritus Care group

Thank you to the wonderful ladies from the Spiritus Care group (below) who came on a tour of QIMR and lent a hand packing pipette tips to help our scientists. This very practical assistance saved our scientists many hours of work in the lab. QIMR uses a staggering 1.5 million pipette tips every year!
Take a tour with Sara-Jane

My name is Sara-Jane Georgeson and I am very excited about joining QIMR as the Community Relations Officer.

I am very passionate about being involved in an organisation that seeks to better our health and our understanding of health issues. Medical research affects us all including future generations and it is inspiring to know our scientists are among the best in the world.

If you are interested in visiting QIMR’s facilities at Herston, I would love to meet you and take you on a tour. I would also be available to come and visit your club or group as a guest speaker on behalf of QIMR. Please contact me on 1800 993 000 to make a booking.

Why donate to QIMR?

- One of Australia’s largest and most successful research institutes
- Dedicated to researching over 40 of the world’s most debilitating diseases
- World class facilities and ethical researchers

Thank you.
Your generosity is appreciated.