



NEWS UPDATE

September 2016

1.62 BILLION PEOPLE ARE AFFECTED BY ANAEMIA GLOBALLY

This corresponds to **24.8%** of the population with the highest prevalence of anaemia in preschool-age children, and the lowest prevalence in men.

However, the population group with the greatest number of individuals affected is non-pregnant woman.

A large proportion of hospitalised patients with chronic infections, cancer, autoimmune disease, and chronic kidney disease, also suffer from anaemia. This is associated with poor prognosis and increases both the recovery time and mortality rate significantly.

This so-called 'anaemia of chronic disease' (ACD) is due to a natural response of our body to withhold iron when faced with serious illness, making it less available for the production of, for example red blood cells.

A breakthrough by Centenary's Structural Biology Program has been able to visualise the main protein responsible for this iron withholding discovering how it is negatively regulated in its delivery of iron in ACD.

The Program is currently using the insights gained from this research for a targeted development of drugs that can effectively 'tune up' this iron withholding, which has the potential to lead to better management of this common disorder.

OVER 20 AUSTRALIANS WILL DIE EACH DAY FROM CHRONIC LIVER DISEASE




There are more than six million Australians, over a quarter of the population, now affected by liver disease.

According to the Gastroenterological Society of Australia's (GESA) report, "The Economic Cost and Health Burden of Liver Disease in Australia" (2013) despite the common belief that liver disease is related to alcohol use, non-alcoholic fatty liver disease (NAFLD) is now our most prevalent of liver disease affecting 5.5 million Australians including 40% of all adults aged 50 years and over.

Liver diseases include both acute and chronic forms of hepatitis, non-alcoholic fatty liver disease and alcoholic liver disease (each of which may progress to permanent scarring and cirrhosis) and liver cancer. Adults and children from any social, economic or cultural backgrounds may be affected.

With a cost of **\$50.7 billion per annum to the public health system liver disease is more prevalent in Australia than is generally recognised.**

Centenary's Liver Injury & Cancer Program, Molecular Hepatology Group, Alcoholic Liver Disease Group and Liver Cell Biology Group are major contributors to the global understanding of how liver damage progresses and how liver cancer cells grow and spread.

<p>THE FACTS ON ANAEMIA</p>	 <p>Anaemia is a condition in which there is a deficiency of red cells or of haemoglobin in the blood.</p>
 <p>When a person is anaemic, their heart has to work harder to pump the quantity of blood needed to get adequate oxygen around their body.</p>	 <p>Anaemia caused by chronic diseases, such as cancer, has a negative impact on prognosis and a significantly higher mortality rate.</p>

<p>THE FACTS ON LIVER DISEASE</p>	<p>7,200</p> <p>It is estimated that over 7,200 Australians will die from liver disease this year alone.</p>
 <p>6 million Australians, over one quarter of the population, will suffer from some form of liver disease in their lifetime.</p>	

If you are interested in making a donation to a specific area of our research, taking part in or holding a community fundraising event please contact us on 1800 677 977 or email donations@centenary.org.au
Thank you for your ongoing support!



EMILY WE COULDN'T HAVE DONE IT WITHOUT YOU

Emily is a member of 'Team Centenary' who took part in this year's City2Surf and one of our awesome fundraisers.

Emily set a target to raise \$7,000 and has now passed her goal with over \$8,000 being raised through her wonderful supporters.

Here's why Centenary's research is so important to Emily and her family.

"In 2011, my husband Michael (aged 35) died unexpectedly from sudden cardiac death. He had no prior symptoms and no known family history.

The Centenary Institute were able to identify the genes responsible for Michael's condition - information which can be used in the future to determine if our children are at risk.

I'm commemorating the five year anniversary of Michael's death by raising money for the Centenary Institute - to say thank you for the work they have already performed - and to help further their research into ways that the condition can be managed in those that suffer from genetic heart disorders.

Around four young Australians, under the age of 35, die every week from sudden cardiac death. The work that the Centenary Institute does is vital for the people affected by these conditions".

A huge thank you is extended to Emily, her wonderful family, friends and supporters who helped her achieve her fundraising target. Your efforts will directly contribute to the groundbreaking research being carried out by our Molecular Cardiology Program lead by Professor Chris Semsarian.



RECOGNISING BOLD INNOVATIVE YOUNG SCIENTISTS

Dr Anne Rios from the Walter and Eliza Hall Institute (Melbourne) is the winner of the Centenary Institute Medical Innovation Awards 2016 "Neil Lawrence" Prize.

The Hon. Pru Goward MP, Minister for Medical Research, made the announcement at a ceremony in Sydney, awarding the \$25,000 prize to Dr Rios for her research titled 'A journey into the unexpected: a 3D view of Breast Cancer'.

Dr Rios has devised a new method for seeing breast tissue in 3D and tracing by an introduced colour individual cells. Armed with these techniques she has understood not only the cellular basis of lactation but also the origins of cancer.

Dr Paul Mason from the Woolcock Institute was recognised by the voting public as the winner of this year's People's Choice Award for his project an 'Educational children's book about Tuberculosis'.

In 2011 Centenary established the Medical Innovation Awards (CIMIA) in honour of Neil Lawrence. The Awards are now acknowledged as one of the most prestigious prizes for early career researchers recognising and rewarding Australia's most creative and innovative young scientists.

Major discoveries are most often made by scientists early in their career, as they acquire their research independence and have the freedom, imagination and energy to produce new ideas and undertake the original experiments that flow from them.

Centenary recognises the invaluable contribution of the Val Morgan Cinema Network, Commonwealth Bank and Thinkable.org to the future of medical research in Australia through their commitment to the Awards.



Congratulations to our Team Centenary members whose combined efforts exceeded the target of \$12,000 for this year's City2Surf. All of us at Centenary thank the team members and their supporters.



To read our 2015 year in review, see all our research highlights, the facts and what's next for our research programs our latest Annual Report is available on our website.

www.centenary.org.au

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