LATEST NEWS

FAMILY MATTERS

Up to 1 in 200 of the general population are affected by Hypertrophic cardiomyopathy (HCM).

HCM is a genetic condition caused by a change or mutation in one or more genes and is passed on through families. Many people with HCM never have any symptoms. Tragically, in some cases the first sign of the disease is sudden death. Because of this, family screening is recommended to relatives throughout life.

Dr Jodie Ingles and Professor Chris Semsarian AM, from our Molecular Cardiology Program, have co-authored an editorial piece published in Circulation: Genomics and Precision Medicine, commenting on hypertrophic cardiomyopathy family screening.

Providing greater certainty and potentially finding a path to more precision-based management of relatives will have immeasurable benefit to families.

TOWARD A FUTURE FREE OF HPV CANCERS

Professor John Rasko AO and Centenary's Scientific Advisory Board Member, Professor Ian Frazer AC, in collaboration with Dr Doug Sipp from the RIKEN Center for Developmental Biology (CDB) in Japan have co-authored an opinion piece published in the prestigious journal Cell titled 'No Vacillation on HPV Vaccination'.

The article tackles the issue of disparity in the implementation of human papillomavirus virus (HPV) immunisation programs globally. "Evidence of the safety and protective benefits of human papillomavirus virus (HPV) vaccines as an anti-cancer measure is overwhelming. However, vaccine uptake varies widely across countries and falls short of levels needed to achieve population immunity", say the authors.

"There is overwhelming evidence that human papillomaviruses (HPV) are responsible for diverse preventable cancers, accounting for 4.5% of all new cancers occurring worldwide and that extensive clinical testing and post-market experience have shown that HPV vaccines deliver safe and durable protection against these tumorigenic viruses.

However, despite compelling objective evidence of benefit, vaccination rates and policies differ markedly in different countries consequent to apparent happenstance." The authors address strategies for the promotion of wider protective HPV immunisation globally in the article.

RECOGNISING INTERNATIONAL WOMEN'S DAY

Centenary joined the global celebration of women's achievements across all fields of endeavour on International Women's Day. Our Gender Equity Program hosted a Mini-Symposium 'Leave no woman behind', with both male and female scientists and support staff taking part in support of a more balanced and prosperous future for medical research.

The Bank of Queensland, one of Centenary's committed and generous partners, invited us to celebrate International Women's Day with their staff.

Dr Shweta Tikoo and Dr Jessamy Tiffen gave inspiring presentations on their areas of research to an enthusiastic group of the Bank's staff. We thank the Bank of Queensland for enabling us to recognise the contribution of women to medical research with you.

HOW TO GET INVOLVED IN 2018

'SOIRÉE WITH THE SCIENTISTS'

We invite you to 'Soirée with the Scientists' on Wednesday 30th May. Join us for an exciting evening of music and science with the Harvard Krokodiloes, guitar virtuoso Jim Pennell and the legendary George Washingmachine.

Dr Jodie Ingles and Dr Ben Roediger, two of our brilliant young scientists, will present their latest research and engage in a Q&A with Professor Chris Semsarian AM.

Tickets include a science themed canape menu, and drinks including a champagne tasting bar courtesy of our friends at the Confrerie du Sabre d'Or! Enquiries v.watson@centenary.org.au

To read all the full stories from our latest news and find out about our events visit www.centenary.org.au.

Your generosity makes a world of difference to our researchers! There are lots of different ways you can offer your support and ensure your contribution is used to directly impact the area of research you are passionate about. If you're interested in making a donation to a specific area of our research please contact us on 1800 677 977, email us at donations@centenary.org.au, or you can make an online donation and nominate the area at www.centenary.org.au

Thank you for your ongoing support!

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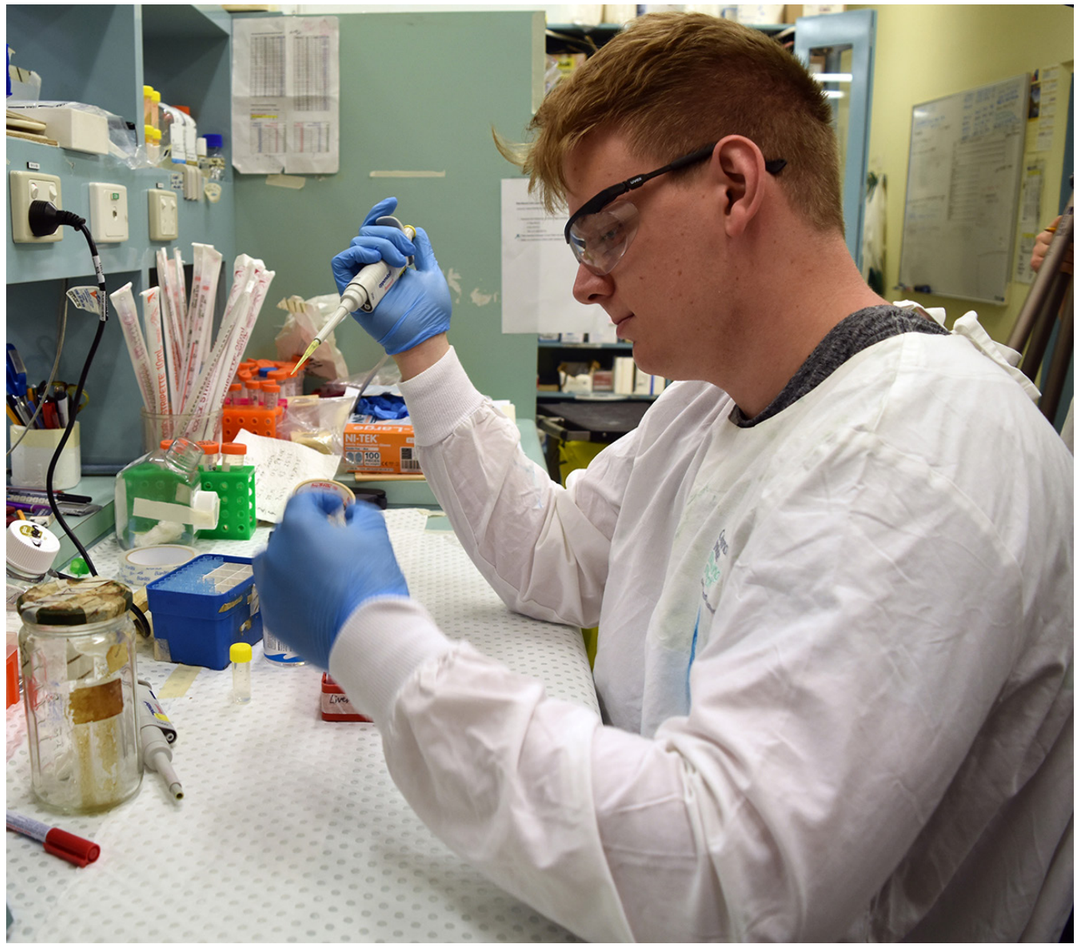
NEWS UPDATE
WINTER 2018

Centenary Institute life saving research
Cancer. Inflammation. Cardiovascular.



Thank you for supporting our life saving research.

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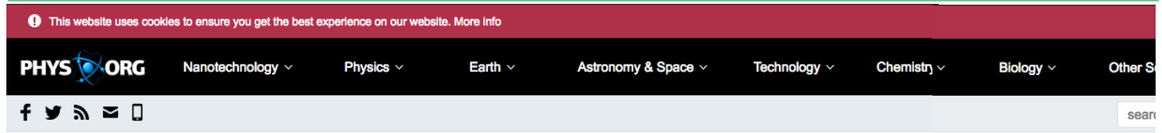
IN THE MEDIA

NEW INSIGHT INTO THE NEVER-ENDING ARMS-RACE BETWEEN VIRUSES AND THEIR HOSTS



New insight into the never-ending arms-race between viruses and their hosts

April 19, 2018, Centenary Institute of Cancer Medicine and Cell Biology

Dr Chris Jolly. Credit: Centenary Institute of Cancer Medicine and Cell Biology

Viruses have been infecting all forms of life – from single-celled bacteria to humans – for as long as there has been life on Earth. Because of this, ancient mechanisms of virus resistance co-exist in our bodies alongside our more-recently evolved and highly sophisticated adaptive immune system.

Centenary's DNA Repair Group led by Dr Chris Jolly have discovered that the enzyme SAMHD1 not only limits the supply of nucleotides to viruses inside infected cells, but also limits the supply of nucleotides to our own DNA synthesis enzymes inside B cells when they are responding to infection in other cells or responding to vaccination.

This discovery and new insights into the never-ending arms race that has been fought against viruses for hundreds of millions of years has been published in the prestigious PNAS journal, one of the world's oldest, most-cited and comprehensive multidisciplinary scientific journals.

Read the full media release and publication here

GROUNDBREAKING STUDY PUBLISHED IN NEW ENGLAND JOURNAL OF MEDICINE

Centenary's Professor John Rasko AO, Head of our Gene and Stem Cell Therapy Program and Head of the Department of Cell and Molecular Therapies at Royal Prince Alfred Hospital, in a world-first news break on Radio National, announced that a cure has been found for a sub-set of what is considered one of the most common genetic diseases in the world – β-thalassemia.

Beta thalassemia (β-thalassemia) is a blood disorder that reduces the production of haemoglobin. Haemoglobin is the iron-containing protein in red blood cells that carries oxygen to cells throughout the body. In people with β-thalassemia, low levels of haemoglobin lead to a lack of oxygen in many parts of the body.

It is reported that approximately 60,000 children are born every year with a serious form of the disease. Listen to the radio interview and view the publication here

HUMANS OF MEDICAL RESEARCH

DR STEFAN OEHLERS

Dr Stefan Oehlers and the Tuberculosis (TB) research group at Centenary, investigate this highly infectious disease, which affects more than a quarter of the world's population. Less than half of the people diagnosed with antibiotic resistant TB are successfully cured so there is a desperate need for new ways to cure this ancient infection.

Australia is now largely protected from TB, but globally, this disease remains a serious problem. TB has killed about one billion people in the last 200 years, "TB is the biggest, oldest and most widespread infectious disease challenge that faces humanity. I'm motivated by big challenges and my group's important work is making a difference," says Stefan.

When Stefan isn't at work tackling this huge global health burden, he finds productive ways to relax, as if he couldn't be more impressive, "I just swapped video games for running, just before I started my own research group at Centenary. This has worked really well for thinking through some of the big picture things around research questions and strategies while I plod around."

Stefan has recently become a father to the adorable seven month-old Joshua, who has changed his approach to work. One of the many advantages of modern science is that researchers can often be on the job remotely via computers, but Stefan has discovered this solution has its own challenges when doing two very important jobs at once! "Babies are really interested in electronic screens so I've had to compartmentalise working from home time to his naps."

Stefan hopes being a dad will make him an even better scientist, he jokes that "that remains to be seen. A colleague told me having kids determining your timetable makes you more efficient at work, I'm still waiting for my efficiency upgrade!" We think little Joshua is sure to inspire great things from you Stefan; we certainly warmly welcome him in to 'Team Centenary'.

Meet more of our Humans of Medical Research here

DR KEN LIU

Dr Ken Liu is investigating new ways to treat liver cancer - the fastest rising cancer in Australia and among the deadliest.

Ken, a PhD student with Centenary's Liver Injury and Cancer Program, is using a novel drug to improve the structure and function of tumour blood vessels (which are usually leaky and disorganised). By improving the quality of these vessels, the team aims to enhance the body's immune response to the cancer and also increase the delivery of any other anti-cancer therapy which is co-administered.

Ultimately, Ken wants his work to have an impact on people like the patients he meets during his clinical work as a doctor. He says: "Throughout my training as a Hepatologist (liver doctor), I came across so many patients diagnosed with liver cancer and most died from the disease. Patients often present too late for curative treatment and current therapies available for advanced disease are extremely limited without any significant discoveries made over the past decade. At the end of the day, it is the patient in front of me that drives me to do research in liver cancer."

In addition to the connection to his patients, the study of liver cancer is personal for Ken, with his own family members and his wife's family affected by the disease. "Both my wife and I have had several family members pass away from liver cancer related to hepatitis B (the most common cause of liver cancer worldwide). Thankfully, the virus can now be effectively prevented with immunisation. However, for those like my family members who contracted the virus before the vaccine became available, they are at risk of getting liver cancer."

Being a scientist requires a great deal of patience, dedication and focus, so down-time is important. For Ken, this means getting outdoors in the fresh air and exercising, "Hiking and bike riding are among my favourite activities." Also handy in the kitchen, Ken, likens cooking to carrying out a science experiment, "I enjoy baking cakes and desserts and sharing them with my friends and colleagues. In fact, the process of baking is not too dissimilar to performing a scientific experiment, except the end product is edible."