

DEMENTIA NEWS

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DISCUSS



UNDERSTAND



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UNDERSTAND ALZHEIMER'S
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EDITORIAL

Hello Dementia News readers,

Seasons greetings! The past fortnight has been a big one for dementia on the global stage. Most significant was the G8 Dementia Summit in London, which brought together Health Ministers from UK, France, Germany, Italy, Russia, Japan, Canada and the USA to discuss how to shape an effective international response to dementia – [read the Alzheimer's Australia summary here](#). The Ministers agreed to increase investment in dementia research, to bolster efforts to translate research into better dementia care, and to introduce measures to reduce the impact of dementia on society. They also endorsed the international objective of developing disease modifying therapies for dementia by 2025.

One of the major outcomes of the summit was defining priority areas for investment in research. These included:

- Clarifying the mechanisms underlying causes of dementia as a basis for identifying new therapeutic targets.
- Prevention of dementia.
- Making timely diagnosis and early intervention feasible, affordable and cost effective.
- Facilitating the integration of care and helping individuals and their carers access care and social services in their homes and communities.
- Making aged care services more responsive to the needs of people with dementia.



Alzheimer's Australia CEO Glenn Rees AM welcomed the response by global health ministers to invest in dementia research and said "there is no question that dementia is one of the major health challenges of this century, and the only way to slow its progression is through research."

At the same time as the G8 Summit was taking place in London, the 16th Asia Pacific Regional Conference of Alzheimer's Disease International was taking place in Hong Kong, with a focus on capacity building in dementia care. Alzheimer's Australia CEO Glenn Rees AM spoke to delegates about the successful Fight Dementia Campaign and about Alzheimer's Australia's contribution to the Australian aged care reforms – [conference link can be found here](#).

Locally, Alzheimer's Australia has made a recent submission to the National Commission of Audit urging the Government to ensure that the search for savings does not undermine important reforms that are currently underway in health and aged care, or lead to the delivery of poor quality services to vulnerable people. [More information on the Alzheimer's Australia submission here](#).



In this final edition of Dementia News for 2013, I've covered a study that looks at the role of the immune system in Alzheimer's disease, and another that outlines an experimental drug which has shown some promise in reducing the amount of amyloid beta protein build up in the brains of mice. I also bring you an update on a major Australian clinical drug trial which started last year. In this edition's Discuss section, I looked into the scientific evidence behind the claims that coconut oil may reverse the symptoms of dementia. It was certainly interesting from a scientific perspective to read through both the anecdotal and scientific evidence on this. I hope you also find it useful.

Finally, I just wanted to say that I have thoroughly enjoyed bringing you the past eleven editions of Dementia News and would like to also acknowledge those who have helped bring you these stories, including the fantastic support of the research team (some of whom are pictured below). Of course, I thank you, the readers, for your many positive comments and feedback.

Dementia News is excited to bring you some new initiatives in 2014, including podcasts featuring recorded interviews with researchers, more stories written by researchers themselves and even a bit of a different look. However, we will still be keeping the same structure and format.

So in closing, I would like to wish all the Dementia News readers a Merry Christmas and a Happy New Year. I will be bringing you the very first edition of Dementia News in 2014 on January 13th. So keep your eyes peeled.

I hope you enjoy this edition,

Dementia News editor
Ian McDonald



Left to right:

Ian McDonald (Research Communications Officer)

Andrea Hogg (Donor Relations Manager)

Mary Gray (Manager, Alzheimer's Australia Dementia Research Foundation)

Chris Hatherly (National Research Manager)

Absent:

Joan Jackman (Partnership Centre Consumer Investigator)

Jane Thompson (Consumer Dementia Research Network Strategic Development Officer)

UNDERSTAND NEW RESEARCH

THE ROLE OF IMMUNE RESPONSES IN ALZHEIMER'S DISEASE

Researchers have found that a specific protein that stimulates the immune system may be associated with brain inflammation, a common condition seen in the brains of people with Alzheimer's disease. This result was published in the latest edition of the Journal *Neurobiology of Aging* by researchers from the University of Melbourne, including Myles Minter, a PhD student supported by the Alzheimer's Australia Dementia Research Foundation. Dementia News asked Myles about the significance of this study; he told us "this is one of the first studies to identify a key link to the inflammation process which happens as a result of Alzheimer's disease."

The researchers found that a specific protein called **type 1 interferon** which stimulates an immune response, was present in much higher amounts in the brains of people with Alzheimer's disease compared to people without Alzheimer's disease. Myles said "this is the first time type 1 interferon has been identified in the Alzheimer's disease brain." The research team also found that mice modified to produce high levels of the amyloid beta protein, commonly found in people with Alzheimer's disease, also produced high levels of type 1 interferon. This research suggests that the brain may be trying to fight the build up of toxic protein through an immune response. However, this immune response could be damaging healthy brain cells.

Myles is making excellent progress with his PhD research and now has one final question to answer. He is assessing whether removing type 1 interferon from mice would play a protective role in preventing Alzheimer's disease. If the removal of type 1 interferon does reduce Alzheimer's disease, the hope is to create a drug that reduces inflammation in the brain to limit the progression of Alzheimer's disease. Dementia News wishes Myles' luck with his PhD research in 2014.

Click on the link for more information

Journal link: [Neurobiology of Aging](#)

Type 1 interferon is a protein produced by white blood cells as one of the first steps in an immune response. This protein acts as an alert signal to other immune cells to come and destroy a foreign body, bacteria, virus or damaged cell. For example, if you prick your finger, swelling at the site occurs. This is because white blood cells have released type 1 interferon and have told immune cells to come to the site and kill any bacteria and viruses they find, to prevent infection.



DEVELOPING DRUGS TO BREAK THROUGH THE BLOOD-BRAIN BARRIER

Scientists from the USA have developed an experimental drug that was able to target brain cells in mice and degrade amyloid beta plaques associated with dementia. This result was published in the Journal *Molecular Therapy*.

This study is important because it has succeeded in developing a molecule that can cross the blood-brain-barrier; a two-way filter that sits between brain cells and the blood vessels that supply them with nutrients. In most cases, this filter only allows small molecules to pass from the blood vessels into the brain cells. This is beneficial in limiting blood-borne infections from entering the brain, but poses a challenge for medical researchers trying to target brain cells with pharmaceutical molecules; most of which are relatively large.

The experimental drug called CTB-MBP, was developed specifically to be small enough to cross the blood brain barrier to target brain cells. The scientists fed CTB-MBP tagged with a fluorescent marker to mice, so that they could track where the drug went in the body using PET scans. The researchers were able to detect the fluorescent marker in the brain, which meant the drug crossed through the blood brain barrier.

Mice with Alzheimer's disease were then divided into two groups, one of which was fed the active drug for three months, and the other given a placebo. Researchers found that mice given the active drug had a 70 % reduction of amyloid beta plaques in the memory region of the brain compared to those on the placebo. The scientists are now aiming to repeat the study to include memory tests to assess whether this drug may enhance memory performance once the amyloid beta plaques are reduced.

Click on the links for more information

Media link: [Scicasts](#)

Journal link: [Molecular Therapy](#)

UPDATE ON AUSTRALIAN ALZHEIMER'S DISEASE DRUG TRIAL

Earlier in the year Dementia News informed its readers of an Australian based Alzheimer's disease drug trial (see Edition 5) for the drug PBT2 by Prana Biotechnology. Forty two participants with mild Alzheimer's disease were recruited for this clinical trial called the IMAGINE trial. Participants were split into two groups and were required to take either the experiment drug known as PBT2 or a placebo drug. Participants, doctors and the researchers were not aware of treatment the participants had received.

Previously PBT2 was shown to have a positive effect in mice; reducing the amount of amyloid beta plaques in the brain and improving memory function over time.

On December 9 of this year Prana Biotechnology announced the completion of the first phase of the study. Only two of the participants did not complete the trial. All participants were given the opportunity to participate in an extension trial, with thirty three agreeing to continue. In the extension trial all participants (including participants that were given a placebo in the phase one study) are required to take the PBT2 for 12 months, as well as undergoing further brain scans, blood tests and cognitive testing. The researchers aim to release the results of the initial trial in March 2014. We'll keep you posted.

Click on the links for more information

Media link: [Wall Street Journal](#)

Trial link: [IMAGINE Trial](#)

DISCUSS THE SCIENCE

CAN COCONUT OIL CURE DEMENTIA? THE EVIDENCE BEHIND THE CLAIMS

Occasional stories on the internet suggest that coconut oil may be able to cure or reverse the effects of dementia. With these claims being made, Dementia News asks 'is there any evidence?' The short answer is no, but let's start at the beginning.

Coconut oil is extracted from the fleshy parts (or kernel) of matured coconuts. One component of coconut oil is caprylic acid. The body breaks down this acid into substances called ketone bodies – a chemical your body can use as a source of energy for the brain. Ketone bodies are usually derived from the breakdown of muscle tissue during starvation or when a person's diet lacks carbohydrates. It is thought that ketone bodies could be an alternative source of energy for damaged brain cells that have lost their ability to use glucose, which may happen in dementia. However, this theory has not been proven.

Coconut oil is also very high in saturated fat (containing seven times more saturated fat than olive oil and 30% more fat than butter).

Is there any scientific evidence that coconut oil might help with dementia?

Caprylic acid is an ingredient in a medical food known as Axona, which claims to delay the symptoms of dementia. A clinical trial evaluated the daily use of Axona in 152 people with mild to moderate Alzheimer's disease. These results were published in the Journal *Nutrition and Metabolism* in 2009. The researchers found there were no significant improvements in memory test scores for those who took Axona daily, over a period of 90 days. A longer term trial was not undertaken.



Only one small study, published last month in the Journal of Alzheimer's Disease, looked at the direct effects of coconut oil on brain cells. When the researchers added a high or a low amount amyloid beta proteins to rat brain cells growing in a Petri dish, approximately 20-60% of the brain cells died, while all the cells without amyloid beta survived. The researchers repeated the experiment but added coconut oil as well. The results showed that coconut oil did not stop the brain cells from dying. However, when a high concentration of amyloid beta protein was to the brain cells, coconut oil improved cell survival by about 20-30%.

This was a very preliminary study, and it remains to be seen whether dietary coconut oil could have the same effect on the human brain. A human clinical trial has just begun in the USA which is assessing the effects of coconut oil on 65 people with mild to moderate Alzheimer's disease over the course of a year. We will keep you posted on the results from this study.

Recommendations

There is no scientific evidence that supports the use of coconut oil to treat or prevent dementia. As stated, we know that coconut oil is very high in saturated fat. Essentially, one tablespoon of coconut oil is about the same as eating one piece of fried chicken - without the protein. This must be factored into any considerations about diet, particularly given that a diet high in saturated fat increases the risk of cardiovascular disease, which in turn increases the risk of dementia.

Alzheimer's Australia always recommends consulting your doctor before making any changes to your diet. To find out more about how to improve your brain health, visit Your Brain Matters www.yourbrainmatters.org.au.

Click on the links for more information

Journal link: [Nutrition and Metabolism](#)

Journal link: [Journal of Alzheimer's Disease](#)

Media Link: [Dementia Blog](#)

Media link: [Medscape](#)

Media link: [CSPI Net](#)

Media link: [Nine MSN](#)

PARTICIPATE TO LEARN MORE

NATIONAL CONSUMER ADVISORY GROUPS ON DEMENTIA LOOKING FOR NEW MEMBERS

Do you have dementia, or do you care for someone with dementia? Are you interested in having a say about the needs of people with dementia in Australia?

Alzheimer's Australia has a number of national consumer advisory groups that are currently looking for new members. These groups work with our organisation, along with policy makers and researchers from across Australia, to advocate for the needs of people with dementia and set priorities for future work. Members of the groups provide their perspective on what matters to them and are not expected to be experts in policy or research.

To find out more about the different opportunities that are available please contact

Samantha Blake

E: samantha.blake@alzheimers.org.au

P: (08) 6271 1007

M: 0457 343 490.

PURCHASE SIMSON CHRISTMAS CARDS TO INVEST IN A FUTURE WITHOUT DEMENTIA

Simson Cards generously donates a percentage of card sales to Alzheimer's Australia Dementia Research Foundation.

Cards can be purchased from Myer, David Jones and selected newsagents.

For more information [click here](#)

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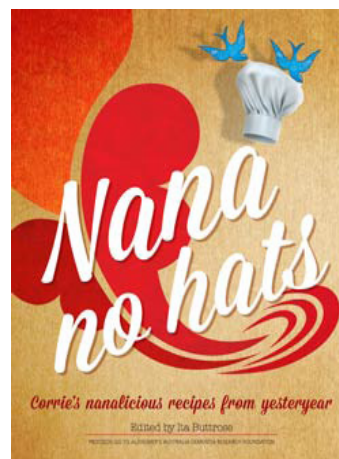
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NANA NO HATS COOKBOOK GREAT CHRISTMAS IDEA

The CorriLee Foundation has released a cookbook, Nana No Hats, a collection of recipes which will bring back childhood memories and raise money for Alzheimer's Australia Dementia Research Foundation.

Purchase a copy for someone special this Christmas:

You can order via this link - <http://bit.ly/1a5Pvin> or they are sold at Dymocks bookstores nationally.



DO TESTS FOR OLDER DRIVERS ACCURATELY ASSESS THEIR ABILITY TO DRIVE SAFELY?

Researchers at the Australian National University Centre for Research on Ageing, Health and Wellbeing are calling for Canberra drivers aged 75 years and older to help answer this important question.

Researchers are seeking to recruit 100 older drivers from the ACT or surrounding areas to participate in the study.

The Driving, Ageing, Safety and Health (DASH) study will compare the methods typically used to assess driving performance, such as tests for vision, balance and understanding of road rules as well as driving performance in an on-road test, to see which methods are actually related to real driving performance.

This involves undertaking a lab-based assessment on campus, followed by a driving assessment with a qualified driving instructor. Involvement in the study will not affect the participant's driving licence in any way.

Participants will also be asked to keep a record of their driving experiences and take part in phone interviews.

To register for the study contact
Ally Gunn
P: (02) 6125 1457
E: ally.gunn@anu.edu.au

DICK SMITH FOODS \$1 MILLION TO CHARITY YOU DECIDE WHERE IT GOES

Dick Smith Foods will donate \$1 million to 74 charities from 1st January to 31st December 2014, and the supporters of Dick Smith Foods will be the sole decision makers as to where the money will go

Alzheimer's Australia Dementia Research Foundation is one of the charities that you can vote for.

If you have a dick smith food product in your pantry here is how you can enter:

- Take a photo of the product/s in your pantry
- Email it to charity@dicksmithfoods.com.au
- Name the charity you wish to support

[More information here](#)

EVALUATION OF THE LEAD CLINICIANS GROUP INITIATIVE

As you may be aware, Health Outcomes International is undertaking the Process and Outcomes Evaluation of the Lead Clinicians Group (LCG) Initiative on behalf of the Department of Health. HOI has completed a baseline analysis and is now conducting Phase 1 of an impact analysis.

We are once again seeking the input of clinicians and others in the health sector

An Online Survey will be available soon via email and through this e-newsletter.

BACKGROUND

The three LCG Initiative strategies are:

1. The National Lead Clinicians Group, to promote improved clinical engagement.
2. A National Clinicians Network (NCN), to promote clinical leadership and engagement through forums.
3. Providing funds to the Australian Medicare Local Alliance to work with Medicare Locals to improve clinical leadership and engagement at the local level.

For further information about the LCG Initiative

www.leadclinicians.health.gov.au/

For further information about the Evaluation

www.hoi.com.au/projects

CONTACT

Any questions or comments are welcome.

To subscribe/unsubscribe or if you have any information you would like to see included in future editions please contact:

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