



## The Research You Support!



Dr Hamid Sohrabi

### Depression and Alzheimer's Exploring the link

The symptoms of depression and cognitive decline have been linked in a recent study led by Foundation supported researcher Dr Hamid Sohrabi, a member of Professor Ralph Martins' research team at Edith Cowan University.

Previous studies have made this link, however the exact nature of the connection has never been clarified. Dr Sohrabi's prior research identified a specific depressive endophenotype (DepE) of cognitive impairment for both Alzheimer's disease and mild cognitive impairment (MCI). MCI is a mild but noticeable decline in a person's memory and thinking skills.

The most recent study examined the link between the previously identified results and cognition among cognitively normal community-dwelling elders. It was confirmed that the signs of depression begin well before the symptoms of Alzheimer's become apparent.

Dr Sohrabi says, "Our findings confirm there is a core group of symptoms that may enable us to differentiate between people at risk of developing dementia and normally aging individuals. This means we can develop a test that will allow us to differentiate between people at risk of developing dementia and normally aging individuals."

For those where depression may be an element leading to cognitive dysfunction, this test will allow early medical and lifestyle interventions such as antidepressant drugs, and increased exercise and social interactions, to prevent or slow their cognitive decline.

The results have been published in the International Journal of Geriatric Psychiatry.

### Blood Lipids Projects

#### Knowledge sharing in mental health research

**Lipidomics is the study of the structure and function of lipids - the fatty compounds found in our bodies that are vital for its function. These compounds are part of the suite of biomarkers being investigated by Professor Ralph Martins and his team in their search for answers about Alzheimer's disease and dementia. This significant study will aid the discovery of a blood test for the early diagnosis of Alzheimer's.**

Lipidomics research features in prominent studies such as the Australian Imaging, Biomarkers and Lifestyle (AIBL) study and underpins some of its work investigating diets and Alzheimer's disease risk. Similar

to heart disease, cholesterol and blood lipids are thought to play a role in the development of Alzheimer's disease. As is often said, what is good for the heart is good for the brain.

A recent development, through the CRC for Mental Health, has been the comparison of lipid profiles between Alzheimer's disease and Schizophrenia. This is based on an observation of similarities of the cognitive decline seen in both diseases, and will assist research groups learning from each other.

Professor Assen Jablensky (UWA, leader of the psychoses programs in the CRC for Mental Health) has provided a subset of his Schizophrenia study samples in a collaboration with Professor Martins to investigate the significance of lipid biomarkers in Schizophrenia, and the specificity of lipid blood biomarkers for Alzheimer's disease.

Dr Florence Lim from ECU has lipid profiled a number of healthy controls and Schizophrenia participant samples on the mass spectrometer - a highly specialised analysis tool purchased by the Foundation. Preliminary results suggest that some of the significant lipids found in Schizophrenia have similar directional trends as Alzheimer's disease. There are also significant lipid changes which are unique to each disease.

**Further statistical analyses are required and will soon be undertaken. However this initial work demonstrates an invaluable collaboration with the sharing of knowledge, methodologies and equipment, for the mutual benefit of two important areas of mental health research.**



The exciting new NRI facility

## The Ralph and Patricia Sarich Neuroscience Research Institute

### Excellence and Collaboration in Research

2015 was a productive year, building on past successes and paving the way to a successful future.

One innovative development is the Ralph and Patricia Sarich Neuroscience Research Institute (NRI). The NRI is an exciting collaboration of the major neuroscience research groups in Western Australia. It will be situated on the QEII Medical Centre campus in Nedlands and is due to be completed by early 2017.

The NRI will allow the McCusker Foundation the opportunity to place its researchers at the cutting edge of world class Alzheimer's disease research. The centre will also support the sharing of equipment, methods and outcomes with other internationally recognised researchers. The facility will accommodate the Western Australian Neuroscience Research Institute, Ear Science Institute Australia, Curtin University and a number of other groups.

The Foundation is grateful for the current financial supporters who are assisting with the successful provision of these world leading facilities. A \$2.4million grant from Lotterywest has been committed to assist with fitout of the state of the art facilities. The Lions Club National Project also generously continues to raise funds Australia-wide for the provision of essential laboratory equipment within the NRI.

More information about your opportunity to support this exciting initiative through the Campaign to Save Memories will be sent to supporters soon. Not only will you assist the consolidation of the McCusker Alzheimer's Research Foundation team, but more importantly you will support active collaboration in the vital research and research facilities required to work towards our shared mission.



Tenielle (back row middle) at the CRC Association conference

## Showcasing Early Career Researchers

### Celebrating research

**Dementia continues to be the second leading cause of death in Australia affecting more than 353,800 Australians. This already frightening number will soar to one million by 2050 without a significant medical breakthrough.**

The importance of including the unique and new skills of early career researchers in our team working on Foundation supported projects is one way we are meeting this challenge head on. One such researcher is ECU student Tenielle Porter, whose PhD is being supervised by Professor Ralph Martins, the Foundation's Director of Research.

The Cooperative Research Centre (CRC) Association operates to promote the pursuit of science and has established an innovative way of developing early career researcher's academic and research communication skills. Each year at their Annual Conference a number of early career researchers are selected to attend and present their research to the conference in the Early Career Researcher Showcase.

Now a highlight of the conference, this year's five finalists included Ms Porter. Tenielle's project is 'understanding the genetic architecture of rates of change in preclinical Alzheimer's disease' – a project supported by the Foundation through the CRC for Mental Health. Tenielle attended the CRC Association conference in Brisbane, The Business of Innovation 2016, and gave a five-minute oral presentation about her research.

**Tenielle's project, which aims to help develop a genetic test for early detection of Alzheimer's disease, is inspired by the need to better understand the disease to enable the development of the most effective treatments.**

### LATEST NEWS

Like [www.facebook.com/McCuskerAlzheimersResearch](https://www.facebook.com/McCuskerAlzheimersResearch) to get the latest news about Alzheimer's disease research breakthroughs and join our wonderful community working towards an Alzheimer's free world.





Will you be at the start line?

## HBF Run for a Reason

### What's your reason?

**A healthy body is one step towards a healthy brain. Discovering whether lifestyle choices prevent or delay Alzheimer's disease is a part of the research that is funded with your support. Lifestyle choices such as a healthy Mediterranean type diet, keeping your mind active, and remaining social have all shown to be linked to a reduced risk of cognitive decline.**

Research also supports that higher levels of physical activity may keep your brain healthy. The HBF Run for a Reason is the perfect opportunity to get out and support a healthy lifestyle. You don't have to be a marathon runner – there are a variety of different courses of different distances. From a 4km leisurely stroll along the Swan River to a challenging 21km half marathon, there's a course for everyone's fitness level.

If that isn't enough of a reason to get you to sign up, you can also support the fight for memories. By registering to join and fundraise in the lead up to the run, you will raise funds to support the very research that may lead to a world free of Alzheimer's disease. Every dollar raised takes us one step closer to our mission.

It's easy to get started.

1. Register to join the run using this link: <https://hbfrun2016.everydayhero.com/au/mccusker-alzeimer-s-research-foundation-inc/get-started>. If you don't already have an Everyday Hero account you will be prompted to join. Go ahead – it's easy.
2. Start fundraising! Once you've registered we'll email you some tips and tricks to help you make the biggest impact you can on the fight for memories.
3. Turn up to the HBF Run for a Reason on 22nd May.

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**If you can't join us, you can also donate directly to the McCusker Foundation Miles for Memories team at: <https://hbfrun2016.everydayhero.com/au/miles-for-memories>. The staff of the Foundation are already out training and have started their own fundraising.**

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We hope to see you there.

## Sunset Supper Club

**A season of great food, entertainment and Alzheimer's awareness.**

The Sunset Supper Club is over for this summer but memories of the food, community, music and global culture will remain with us.

The relaxed family friendly food market held at Garden City ran for five months from October 2015 and was a thriving and enjoyable event throughout their season.

The McCusker Foundation was fortunate to be the charity recipient of the event. Researchers and staff attended the market to talk to the community about how lifestyle and diet can help delay Alzheimer's disease symptoms, the current trials taking place, and the research projects to find better treatments and a cure that are underway.

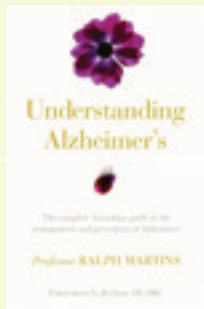
The Foundation is very grateful to have been involved in such an important community event. A special thank you to the organisers Paul Litwin and Craig Francis, and the All Saints College students who were instrumental in selling loyalty cards throughout the season, raising \$2,500 for Alzheimer's disease research.



Just one of the delicious healthy meals that was available at Sunset Supper Club

## Understanding Alzheimer's

A book to answer common questions.



Alzheimer's affects not only the person with the disease, but also those caring for or watching the disease progress in someone they love. If this resonates with you, 'Understanding Alzheimer's' may be the book to answer some of your questions. It

shares stories and experiences that will reinforce that you are not alone.

Chapters delve into diagnosing Alzheimer's, what we know about the disease, current and future treatments, lifestyle choices that may reduce the risk of getting the disease, and personal stories that will resonate with us all.

The Foundation's focus is research to prevent, find a treatment, or cure the disease. Until this time we hope this book compiled by the Foundation's Director of Research Professor Ralph Martins and his team provides unique insights and practical guidance for you about Alzheimer's.

## Study Participants Required

The Foundation is currently seeking study participants who have early memory problems or early stage Alzheimer's disease to participate in a number of clinical trials. If you are interested please phone 08 9347 4200 or email [info@alzheimers.com.au](mailto:info@alzheimers.com.au) and your details will be passed to the research team.

This support is vital to our work and very much appreciated.

## Join the Fight for Memories!

Your generous support is greatly appreciated and welcome at any level. Every gift works towards an Alzheimer's free world.

Your gift enables research into memory studies, brain imaging and blood tests to find early diagnosis tools. It supports research into lifestyle choices that will delay the onset of Alzheimer's symptoms. And it will further work developing better treatments for those already diagnosed.

There are many ways you can help the fight for memories.

- A gift of any size at any time
- Becoming a pledge for memories partner
- Fundraising for an event you are participating in
- Holding your own fundraising occasion with friends and family.

We thank you for your assistance in these ways, and in many more.

## You can make a gift now

Your support today will take us all one step closer to an Alzheimer's free world. By making a donation to the McCusker Alzheimer's Research Foundation you will join a team of dedicated researchers determined to make a real difference to people all over the world. Together we will develop treatments and find a cure for this devastating disease.

**Use the donation reply coupon enclosed, or the donation slip at the bottom of this page to make a donation now. Your gift can save precious memories!**



## Leave a gift in your Will

Has a family member or friend been affected by Alzheimer's disease? We wish that our vision for an Alzheimer's disease free world was a reality in time to make a difference to them now. But just because it isn't a reality right now, doesn't mean we won't keep trying. Our researchers will keep going until we have earlier diagnosis tools, better treatments and ultimately, a cure.

But to do that, we are asking for help.

You can play a vital role in reaching an Alzheimer's free world. Will you consider including a gift to the McCusker Alzheimer's Research Foundation in your Will?

If you are considering leaving a gift to support Alzheimer's research in your Will, or just have a few questions about how to go about it, please contact the CEO on phone 08 9347 4200 for a confidential discussion, or return the form below with the appropriate box ticked.

## Contact us

McCusker Alzheimer's Research Foundation Inc    Suite 22, Hollywood Medical Centre 85 Monash Ave, Nedlands WA 6009    T 08 9347 4200    E [admin@alzheimers.com.au](mailto:admin@alzheimers.com.au)

## Yes, I will join the fight for memories!

### Make a donation by:

- Call: **08 9347 4200**
- Visit our website: **[alzheimers.com.au](http://alzheimers.com.au)**
- Mailing the completed form in the envelope provided to:  
**Suite 22, Hollywood Medical Centre  
85 Monash Ave, Nedlands WA 6009**

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x Understanding Alzheimer's books (\$35 each incl p&p)    Total \$

I would like to make a donation of:  
 \$25    \$50    \$75    \$100   **OR**    \$

**OR** I would like to make an ongoing credit card donation of:  
\$  every  Month    3 Months    6 Months    12 Months

Credit Card (Visa/Mastercard)    Cheque    Money Order\*  
Cheque or money order made payable to McCusker Alzheimer's Research Foundation

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Card Holder's Name:

Expiry:     Signature:

Please send me more information on:  
Leaving a gift to McCusker Foundation in my Will

Thank you! A receipt will be sent to you. All donations over \$2 are tax deductible.