



Healthy Development Adelaide
A Research and Innovation Cluster in South Australia

LATEST NEWS



New HDA Co-Convenor

A/Professor Pammi Raghavendra
Disability & Community Inclusion
College of Nursing & Health Sciences
Flinders University

Pammi is a speech pathologist with extensive research, teaching and clinical experience in working with children and young people with disabilities especially those with severe communication impairments.

Pammi's current research focuses on investigating the impact of mobile technologies on communication and social networks of young people and adults with developmental or acquired disabilities.

OUR PARTNERS

PLATINUM



THE UNIVERSITY
of ADELAIDE



GOLD



University of
South Australia

SILVER



Government of South Australia
Department for Education



Government of
South Australia

Women's and Children's Health Network



Flinders
UNIVERSITY



SAHMRI
South Australian Health &
Medical Research Institute



Healthy Mothers,
Babies and Children

BRONZE



LATEST NEWS, CON'T

NEW HDA MCR (Middle Career Researcher) CO-CONVENOR



A/Professor Carol Maher

NHMRC Career Development Fellow
Alliance for Research in Exercise, Nutrition and Activity (ARENA)
School of Health Sciences & Sansom Institute for Health Research
University of South Australia

With a background in physiotherapy, Carol's research focuses on how children's and adults' daily activity patterns (e.g. physical activity, sleep and sedentary behaviours) impact their health.

In particular, Carol's interested in how technologies such as wearables, online social networking, mobile phone apps, gamification can be used to improve lifestyle in a fun engaging way, and how these interventions can be delivered at scale to positively impact Australia's health.

Carol has received over 4.5 million in research funding, has published 140 journal articles, and is Section Editor for BMC Public Health.

NEW HDA / Channel 7 Children's Research Foundation PhD Excellence Awardees 2019



Shabnam Kashef

Nutrition and Dietetics, College of Nursing and Health Sciences, Flinders University
Primary Supervisor: A/Prof Rebecca Golley; Co-Supervisor: Dr Dorota Zar-nowiecki

Project title:

The relative impact of four public health nutrition strategies to increase vegetable intake of children's attending long day care.

The aim of this study is to increase children's vegetable consumption through the development, implementation and evaluation of initiatives targeting vegetable provision and promotion within long day care settings.



Nghia Pham

Future Industries Institute, University of South Australia
Primary Supervisor: Prof Benjamin Thierry; Co-Supervisor: Dr Marnie Winter

Project title:

Development of an integrated lab-on-chip device for the isolation and analysis of circulating fetal trophoblastic cells towards detecting pre-eclampsia in early pregnancy.

This project will build on this achievement towards an integrated technology allowing not only isolation but subsequent downstream processing, in particular a streamlined approach for single-cell transcriptomics.

HDA RESEARCH MEMBER PROFILE - DR DANDARA HAAG SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF ADELAIDE



Dandara is a postdoctoral fellow in the School of Public Health and in the School of Dentistry, University of Adelaide, Australia. She is part of the BetterStart Child Health and Development research group led by Professor John Lynch and the Indigenous Oral Health Unit, led by Professor Lisa Jamieson.

She has a Bachelor in Dentistry and a PhD in Dental Public Health, with expertise in epidemiologic research methods, translational research and Aboriginal Oral Health. During her PhD she evaluated the impact of general and oral health conditions on individuals' quality of life using data from one of the largest population-based cohort studies among adults in Brazil. As part of the Dental Practice Research Unit, Dandara contributed in the development of evidence-based information brochures, which were sent out to all oral health practitioners in Australia and New Zealand as part of their

Continuing Professional Development requirements.

As part of the BetterStart Child Health and Development research group Dandara has worked on several projects studying the effects of early life disadvantage on children's later development. Her works mainly concerns the South Australian Early Childhood Data Project (ECDP), a large administrative data linkage project, which informs research, service provision and policy around child development in South Australia. Over the last two years she has been involved in different research projects, in collaboration with multiple government departments including child protection, health and education departments. Dandara also has experience working on the Longitudinal Study of Australian Children (LSAC) and the Longitudinal Study of Indigenous Children (LASIC), studying the effects of socioeconomic disadvantage and parenting time investments in children and their effects later in life.

As part of her work with the IOHU, Dandara is involved in a collaboration studying the Indigenous and Non-Indigenous oral health inequalities across multiple countries. In addition, she is leading investigations around the role of racism at a systemic level in producing such inequalities in Australia. Dandara is also part of the advisory board of the Baby Teeth Talk Study, an RCT involving an intervention to reduce dental caries among Aboriginal communities.

☎ 8313 1635

✉ dandara.haag@adelaide.edu.au

NEW HDA MEMBERS

Prof Benjamin Thierry, NHMRC CD Fellow
Future Industries Institute, UniSA
Focus - biomedical engineering

Karagh Loring, PhD Candidate
Discipline of Paediatrics, University of Adelaide
Focus - childhood neurodevelopmental disorders

Yaser Peymanfar, PhD Candidate
School of Pharmacy & Medical Sciences, UniSA
Focus - bone growth and repair

Would you like to be eligible for HDA Travel Grants and PhD top-up Scholarships?

All PhD students and early career researchers from the University of Adelaide, UniSA and Flinders University can be eligible

Senior Researchers are also encouraged to join and encourage their current and new students to join HDA to receive the benefits

No cost to join. Visit the HDA website for further info and our background document or contact anne.jurisevic@adelaide.edu.au

Become a HDA Research Member today!!

Binge eating and smoking linked to bullying and sexual abuse

Media Release - 11 January, University of Adelaide



People who ever suffered bullying or sexual abuse have a lower quality of life similar to those living with chronic conditions like heart disease, diabetes, depression or severe anxiety, a new study from the University of Adelaide has found.

They are also far more likely to display harmful behaviours like smoking dependence and binge eating.

The study, published in BMC Public Health, investigated around 3000 South Australians who took part in face-to-face interviews using self-labelling questions to measure the age of onset and duration of bullying and sexual assault and their outcomes during home interviews. The study included participants of all ages, urban and rural settings and socioeconomic levels living in South Australia.

"In Australia almost half of all adults have experienced bullying and 10% have experienced some form of sexual abuse, and these experiences have had long-term effects on harmful behaviours, depression and quality of life," says Dr David Gonzalez-Chica from the University of Adelaide's Medical School.

While 60-70% of these forms of abuse occurred in childhood or adolescence, they were associated with worse outcomes later in life.

"Sexual abuse and bullying were related to harmful behaviours like smoking dependence and binge eating, antidepressant use, and reduced quality of life," Dr Gonzalez-Chica says.

"Those who suffered bullying and sexual abuse were three times more likely to be binge eaters than people who had never experienced these forms of abuse. "Antidepressant use was up to four times more likely and smoking dependence was twice as frequent."

If someone had two or more adverse outcomes (smoking dependence, binge eating, antidepressant use, and a lower quality of life) the probability they had suffered bullying and/or sexual abuse ranged between 60-85%.

"Talking about an experience of bullying or sexual abuse in a face-to-face interview is very complicated because of the sensitive nature of these questions," Dr Gonzalez-Chica says.

"The study showed that it is feasible to use such kind of short but well-structured questions instead of long questionnaires to explore these issues.

This is particularly relevant for medical appointments where there is limited time for exploring so many different outcomes.

"If a doctor finds a patient with multiple harmful behaviours – like smoking dependence and binge eating – who is depressed and has a lower quality of life, they should consider exploring whether these patients were victims of bullying and/or sexual abuse, as according to our results it is very likely they suffered from these forms of abuse.

"Identifying survivors of both forms of abuse is important to provide support and reduce more severe mental and physical consequences, such as suicide."

The Conversation, 6 February

Considering using IVF to have a baby? Here's what you need to know

If it's not you, perhaps it's someone you know. You don't look infertile, you don't feel infertile, but after many months (or years) of trying to start a family, followed by several months of monitoring your cycle in a fertility clinic, it's time to discuss IVF.

This is a big decision. It will impact your time, your finances, your emotions, your relationships and your dreams of being a parent. Despite the language of "falling pregnant", inferring absolute simplicity, infertility is a reality for one in six Australian couples.

The full story at <https://theconversation.com/considering-using-ivf-to-have-a-baby-heres-what-you-need-to-know-108910>

Gene discovery holds promise against obesity

Media Release - 6 December, Flinders University



It sounds too good to be true, but a novel approach that might allow you to eat as much as you want without gaining weight could be a reality in the near future. When a single gene known as RCAN1 was removed in mice and they were fed, they failed to gain weight, even after gorging on high-fat foods for prolonged periods.

The international team, led by Associate Professor Beverly Rothermel at the University of Texas Southwestern Medical Center and Professor Damien Keating at Flinders University, are hopeful a similar approach that inhibits this gene will also be effective with humans to combat obesity and serious diseases like diabetes. The study used a large genetic screen in rodents to identify novel genetic candidates that may cause obesity, potentially paving the way for new drug therapies.

“We know a lot of people struggle to lose weight or even control their weight for a number of different reasons,” says Professor Keating, from the Molecular and Cellular Physiology Laboratory at the College of Medicine and Public Health at Flinders. “The findings in this study could mean developing a pill which would target the function of RCAN1 and may result in weight loss,” he says.

Obesity is a major global health epidemic, resulting in increased risk of serious diseases like type 2 diabe-

tes, and heart disease, but avenues for effective therapeutic treatments are lacking.

There are two types of fat in human body – brown fat burns energy, while white fat stores energy. Professor Keating says blocking RCAN1 helps to transform unhealthy white fat into healthy brown fat, presenting a potential treatment method in the fight against obesity.

“We have already developed a series of drugs that target the protein that this gene makes, and we are now in the process of testing them to see if they inhibit RCAN1 and whether they might represent potential new anti-obesity drugs,” he says.

“In light of our results, the drugs we are developing to target RCAN1 would burn more calories while people are resting. It means the body would store less fat without the need for a person to reduce food consumption or exercise more.”

Two-thirds of Australian adults and a quarter of children are either overweight or obese, and the statistics are just as concerning in Britain and the US.

“Co-investigators in the research, Dr David Rotter and Heshan Peiris, looked at a variety of different diets with various timespans from eight weeks up to six months, and in every case we saw health improvements in the absence of the RCAN1 gene,” says Professor Keating, an NHMRC Principal Research Fellow at the Centre for Neuroscience at Flinders University.

The researchers say these findings open up a potentially simple treatment but further studies are required to determine if they translate the same results to humans.

“Our research is focused on understanding how cells send signals to each other and how this impacts health and the spread of disease”. We really want to pursue this, it’s exciting and we have research funding from the Australian government through the National Health and Medical Research Council (NHMRC) to continue to explore viable options. These results show we can potentially make a real difference in the fight against obesity.”

The Conversation, 5 February

Just So You Know... The Conversation launches a Q&A service for teens

We have access to Australia’s top academic experts, and we want to unlock their expertise to answer teenagers’ questions.

If you’re a teenager and have a question you’d like answered, there are a few ways you can contact us:

- email jsyk@theconversation.edu.au with your question
- submit your question anonymously through Incogneato
- DM us on Instagram
- tweet us @ConversationEDU and use the hashtag #jsyk
- or get in contact through our education Facebook group.

The full story at <https://theconversation.com/just-so-you-know-the-conversation-launches-a-qanda-service-for-teens-103432>

Smartphones: are they just a pain in the neck?

Media Release - 16 January, UniSA



A large majority of the world's 3.4 billion smartphone users are putting their necks at risk every time they send a text, according to new research involving the University of South Australia.

'Text neck,' as it is colloquially called, places stress on the spine and alters the neck's natural curve, increasing the likelihood of associated soft tissue discomfort.

A recent international study published in *PLOS One*, highlights the high ergonomic risks to smartphone users, particularly young people, who are experiencing neck pain earlier than previous generations. Researchers from Khon Kaen University video recorded 30 smartphone users in Thailand aged between 18-25 years, who spend up to eight hours a day on their phones. Using a Rapid Upper Limb Assessment tool (RULA) to measure ergonomic risk levels, they found that the average score for the participants was 6, compared to an acceptable score of between 1-2.

"The results identified issues with unsuitable neck, trunk and leg postures which lead to musculoskeletal disorders," says lead researcher Suwalee Namwongsa.

RULA has been used to assess the ergonomic impacts of desktop computers and laptops in the past but this is believed to be the first time the tool has been used to assess ergonomic risk levels of excessive smartphone use. Dr Rose Boucaut, a UniSA physiotherapist involved in the paper, says the awkward postures adopted by smartphone users can adversely affect the soft tissues.

"Smartphone users typically bend their neck slightly forward when reading and writing text messages.

They also sometimes bend or twist their neck sideways and put their upper body and legs in awkward positions," Dr Boucaut says. "These postures put uneven pressure on the soft tissues around the spine, that can lead to discomfort."

In a separate study published this month in the journal *WORK*, the same researchers also surveyed 779 Thai university students who use smartphones, with 32 per cent reporting neck pain, 26 per cent shoulder pain, 20 per cent upper back pain and 19 per cent wrist and hand pain.

Musculoskeletal disorders were more common among students with higher smartphone use (more than five hours a day) and those who smoked and did little exercise. Female smartphone users also experienced far more musculoskeletal disorders than men – 71 per cent compared to 28 per cent. This study is the first to show the association between smoking, smartphone use and neck pain. Of the 11 students who identified themselves as current smokers, nine of them had musculoskeletal disorders. The low number of smokers reflects the no-smoking policy of the Khon Kaen University.

Previous clinical studies have demonstrated that cigarette smoking is harmful not only to lungs but also to soft tissues, decreasing healing time at a cellular level.

Dr Boucaut says the findings should be communicated to health professionals who treat people with neck and back pain and may not always link their symptoms to smartphone use.

"It's also doubtful whether people experiencing back and neck pain (especially young people) are aware it could be as a result of excessive smartphone use," Dr Boucaut says. "Health practitioners need to educate their patients about safe postures and curtailing time spent using smartphones to help prevent these issues."

Some smartphone companies are now sending unsolicited messages to their customers notifying them of their average time spent on daily smartphone use. "This feedback may help users connect neck discomfort with smartphone use and encourage them to reduce time spent texting," Dr Boucaut says.

The Conversation, 22 January

Three Charts on who uses illicit drugs in Australia

Some 43% of Australians aged 14 years or over have used an illicit drug at least once in their lifetime. Nearly 16% have used an illicit drug at least once in the last year; around 75% of those use infrequently, between once and 11 times a year.

By far the majority of both lifetime and recent use is of cannabis (around 35% lifetime use), with other drugs such as ecstasy (MDMA) (around 11%), hallucinogens (around 9.5%) and cocaine (around 9%) much less commonly tried. Methamphetamine (including "ice") is the fifth most commonly used drug at around 6% lifetime use.

The full story at <https://theconversation.com/three-charts-on-who-uses-illicit-drugs-in-australia-110169>

Webinar: Sharing information and engaging with parents about child mental health



Sharing information and engaging with parents about child mental health

12 February, 1:00–2:00pm AEDT

Presenters: Angela Obradovic, Myfanwy McDonald and Mandy

Co-produced by CFCA and Emerging Minds, this webinar will explore how practitioners can share information about children's mental health (0-12 years) and effectively engage parents to support prevention and early intervention for child mental health difficulties.

Further info and registration at the AIFS website

<https://aifs.gov.au/cfca/events>

8th SNAICC Conference *Growing up with strong identity, strong culture and strong connection*

The 8th SNAICC National Conference:

Growing up with Strong Identity, Strong Culture and Strong Connection

2-5 September 2019

All papers submitted will need to address one of the key themes of the conference: – keep them safe, in culture, in community and connected to family; growing them strong; partnership, collaboration, and relationships for better outcomes: community advocacy for change; leading the development of integrated, holistic, culturally-effective service systems within communities and regions, and across jurisdictions and sectors.

Call for papers closes 22 February. Please feel free to contact the Conference Secretariat or SNAICC's conference organiser Poppy Bervanakis at (03) 9489 8099 or email: poppy.bervanakis@snaicc.org.au

Youth Symposium Report - *Leading for our Future*

The Australian Migrant Resource Centre and the Commissioner for Children and Young People SA invite you to the Launch of the Youth Symposium Report - *Leading for our Future*

Wednesday 20 February 5.00pm

AMRC Adelaide Multicultural Centre, 23 Coglein Street, Adelaide

With Speakers: John Evangelista, Director, *Traineeship and Apprenticeship Services Department for Industry and Skills*. **Denis Yengi CPA**, Financial Consultant, *Primary Industries and Regions SA (PIRSA)*. **Sara Omar**, Year 11 Student, *Pinnacle College*

Please RSVP by Monday 18 February 2019 to alma@amrc.org.au or (08) 8217 9547.

Webinar: Babies' Brains Are Fed When You Paint The Town REaD



Barbie Bates, Executive Director of *Paint the Town REaD* (PTTR) offers an introduction to the PTTR early language and literacy movement, which aims to encourage everyone in the community to read, talk, sing, rhyme, and draw with young children so that they will be ready for learning at school.

Title: Babies' Brains Are Fed When You Paint The Town REaD

Date: 20 February 2019

Time: 12.00-1.00pm AEDT (Eastern Daylight Time as used in ACT, NSW, VIC, and Tasmania)

Price: Free for ARACY Members / \$25 +GST for non-members

Register at: aracy.org.au/events/event/webinar-paint-the-town-REaD

DOHaD Conference 2019

Investing in a healthy future for all: research, education, policy

The DOHaD Society of Australia and New Zealand is proud to host the 11th DOHaD World Congress; an initiative directly aligned with the global agenda to combat the devastation of non-communicable diseases (NCDs). The integrated cross-disciplinary congress will further our understanding of the inextricable link between pre-conception, paternal, maternal, perinatal, early childhood and adolescent factors and the risk of developing NCDs in later life.

The Theme for the 2019 International DOHaD Congress is 'Investing in a healthy future for all: research, education, policy' and we invite submission of abstracts for the meeting. There are no limits on the number of abstracts each researcher may submit.

The Congress will bring together basic and clinical researchers and healthcare professionals from around the world to address the many challenges that currently impact the health of mothers and fathers, babies in the womb, infants, children and adolescents, as well as explore solutions, interventions and policies to optimise health across the lifespan.

Abstracts now open and close on 22 February.



DOHaD 2019.
Melbourne Australia

Investing in a healthy future for all.
Research...Education...Policy

www.DOHaD2019.org

October 20 - 23, 2019

The DOHaD Society of Australia and New Zealand
Developmental Origins of Health and Disease

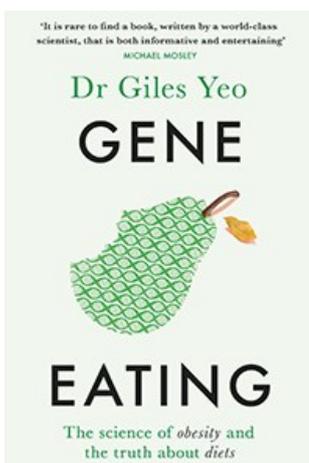
DOHaD Society
International Society for Developmental Origins of Health and Disease

Gene Eating by Dr Giles Yeo Hawke Centre Event, UniSA

Gene Eating: The Science of Obesity and the Truth about Diets
Dr Giles Yeo

Tuesday 12 March, 7.00-8.15pm

ALLAN SCOTT AUDITORIUM, HAWKE BUILDING, UNISA CITY WEST CAMPUS



Why are we all getting fatter? Why are some people hungrier than others? Why, despite all of the latest advice, is obesity on the rise? And why don't diets work?

Drawing on the very latest science, and his own genetic research at Cambridge University, Geneticist Dr Giles Yeo has written the seminal 'anti-diet' diet book. Exploring the history of our food, debunking marketing nonsense, detoxifying diet advice and confronting the advocates of clean eating, Giles translates his pioneering research into an engaging, must-read study of the human appetite.

Book Launch of **Gene Eating: The Science of Obesity and the Truth about Diets**. This event is an opportunity to better understand the physiology of our bodies and discover how we can achieve healthy relationships with food.

Further info and register at <https://www.unisa.edu.au/Business-community/Hawke-Centre/Events-calendar/gene-eating/>