

Dementia News

Pink Panther theme song provides insights into dementia

The Pink Panther theme song amongst other famous tunes has provided researchers with insights into the differences between forms of dementia and the role of the right temporal pole in processing music.

Professor John Hodges and a team of researchers from Neuroscience Research Australia conducted a study to determine whether famous tunes are preserved in the memory of people living with Semantic dementia.

Semantic dementia is a unique form of memory loss where people lose their ability to understand the meaning of words and the ability to relate words to pictures or objects.

The researchers studied three different groups of participants: 13 people with Semantic dementia, 14 people with Alzheimer's disease and a group of 20 healthy participants as a control. Each group of participants were tested to assess their knowledge of famous tunes, environmental sounds, and famous faces. The participants also underwent volumetric magnetic resonance imaging in order to assess the areas of their brain damaged by the diseases.

Results indicated that when researchers presented their participants with the familiar tunes of the Pink Panther, Waltzing Matildas and the Happy Birthday song, it was found that 60% (10 out of 13) of participants with Semantic dementia could not recall the music. The three participants with Semantic dementia that could recognise the famous songs were found to have less atrophy to the temporal pole in the brain.

The correlation between atrophy in the temporal pole and the decreased ability to recall songs was also evident in the participants with Alzheimer's disease, even though majority of participants with Alzheimer's could recall the famous songs.

The research indicates that a symptom of Semantic dementia could be the loss of the ability to recognise and enjoy music. The studies findings also highlight the role of the right temporal lobe in the processing of known tunes and the differences between Semantic dementia and Alzheimer's disease.

For more information click on the links below:

Press Link: [ABC Science](#)

Journal Link: [Oxford Journals](#) (2)



Pink Panther theme song amongst other famous tunes provides insights into Semantic dementia and Alzheimer's disease (1).

In the news

- The Pink Panther theme song provides insights into dementia.
- Stress associated with Alzheimer's disease.
- GPS tracking for people with dementia: research into ethical outcomes.
- *Case in point:* preconditioning of cells in the brain.
- A beverage a day may keep the dementia away.
- Forget- Me- Not Cocktail party for Alzheimer's.
- Wanted: Researchers for Alzheimer's Australia grants.



Stress associated with Alzheimer's disease

Stress may play a part in the development of one of the hallmarks of Alzheimer's disease, neurofibrillary tangles, according to a recent study in *The Journal of Neuroscience*.

Ioannis Sotiropoulos and a team of international researchers conducted a study to determine the relationship between a stress related protein called cortisol, memory and the development of neurofibrillary tangles. Over a 14 day period, the researchers observed a group of rats that were exposed to high levels of stress, another group that were injected with cortisol and a control group. The development of neurofibrillary tangles was measured by the increased generation of a particular form of Tau protein, a chemical that contributes to the formation of neurofibrillary tangles.

The results of the study indicated that the healthy rats exposed to stress were found to have an increase in levels of cortisol in the body. This also correlated with an increase in the particular form of Tau protein that was monitored. The researchers suggested that stress hormones such as cortisol can cause abnormal increases in the generation of Tau protein, similar to those that arise in people with Alzheimer's disease.

The researchers claimed that viewing stress as a trigger for Alzheimer's disease offers exciting new research possibilities for preventative measures.

For more information click on the links below:

Press Link: [BBC news](#)

Journal Link: [British Medical Journal](#) (3)



GPS tracking for people with dementia: Research into ethical outcomes

Global Positioning system (GPS) technology is becoming increasingly popular for both private and public use in order to track and monitor people in different locations. One field of interest is the use of GPS to enhance the personal safety of people living with dementia.

Dr Rupert McShane and a team of international researchers were recently the first in the United Kingdom to conduct research into the positive and negative outcomes of GPS, when designed for the use of people living with dementia.

The research will explore ethical concerns such as whether the participants understand the monitoring technology and if the best interests of the person with dementia is the primary motivation for its use. BBC news reported that Chief Executive of Alzheimer's Society Neil Hunt remarks that the technology "must never be a substitute for good quality care or a way to reduce care costs."

The new design will be tested and researched over a 2 year trial period with 20 people living with dementia in the United Kingdom.

For more information click on the below link.

Press Link: [BBC news](#)



Case in Point

Preconditioning of cells in the brain

Preconditioning in the brain refers to a natural mechanism that protects the body by associating a harmful event with a fast biological response.

Preconditioning can be related to the concept of a vaccine. When a vaccine is administered, a small amount of an inactive virus is injected into the body in order for the body to build immunity towards the particular virus.

In the same way, research suggests that in some cases the brain can be preconditioned to better deal with harmful events such as a stroke. If a person is repeatedly exposed to small harmful event, the brain sends a message to the cells to increase the regulation of energy. This allows the brain cells to be better protected against harmful assaults of the same nature.

Ischemic (reduced blood supply) preconditioning has been found particularly useful for people that suffer from continued coronary risk such as a person that has suffered from strokes.

Ischemic preconditioning involves reducing blood supply to particular tissues in the brain for less than 5 minutes repeatedly. Research on mice and in experimental therapy on humans has found that depending on the amount of repeated exposure, the effects of preconditioning can lead to protection against larger ischemic assaults for up to 24 hours.



A beverage a day may keep the dementia away

Light to moderate drinking may reduce the risk of dementia and other forms of cognitive impairment, according to research published recently in the *Journal of Neuropsychiatric Disease and Treatment*.

Dr Judith Neafsey and Professor Michael Collins from the Department of Molecular Pharmacology conducted a meta-analysis to determine the possible effect of alcohol on cognition. The researchers reviewed literature from 1977 to the present which examined the relationship between drinking and cognitive performance. The meta-analysis found that individuals who engaged in moderate drinking either had the same or reduced risk of cognitive impairment when compared to individuals that did not drink. The researchers suggested that this may have occurred because alcohol acts as a mild stressor for brain cells and 'preconditions' them, making the brain cells better able to ward off other forms of stress in the future.

According to an article published in *Medscape News* Dr Neafsey suggested that "Alcohol doesn't kill the brain cells, but it's a slight stress. When the cells are exposed, they increase levels of various protective compounds, so...they are prepared when something more stressful that might kill or damage them comes along".

The authors of the meta-analysis suggested that understanding how alcohol could act as a protective brain mechanism could potentially lead to a treatment.

For more information click on the links below:

Press Link: [Medscape News](#)

Contact

Any questions or comments are welcome.

If you have any information you would like to see included in future editions please contact us:

dementia.news@alzheimers.org.au

(02) 6278 8909



FOLLOW ME ON [twitter](#)

If you would like to receive regular updates on research trials seeking participants, please email: trials@alzheimers.org.au

Forget– Me– Not Cocktail party for Alzheimer's

Alzheimer's Australia's National Young Ambassadors are gearing up for their second fundraiser during Dementia Awareness Week. This year they will be hosting a fundraising cocktail party at The Pavilion, nestled in the gardens of the Botanical Gardens, Sydney. All proceeds will be donated to the Hazel Hawke Alzheimer's Research and Care Fund.

Event Details:

Saturday 24th September 2011
The Pavilion, 1 Art Gallery Rd, Sydney
7:30pm for 8:00pm
\$115 (incl credit card fee)
www.trybooking.com/RUY



Read more about [Alzheimer's Australia's Young Ambassadors](#).

Wanted: Researchers for Alzheimer's Australia Research (AAR) Grants

This year AAR is offering a new category of grants: AAR-Vic Dementia Research Grants, valued at up to \$40,000. The two grants in this category are open to Australian based dementia research, but priority will be given to projects based in Victoria, or with potential benefits especially relevant to Victorians.

AAR is also offering five postgraduate scholarships, including the Viertel Foundation Postgraduate Scholarship, and the Resthaven Inc. Postgraduate Scholarship for Quality in Dementia Care.

Applications for both programs are now open. Further information can be found at <http://www.alzheimers.org.au/research-publications/research-grants.aspx>.

References:

- 1) Image: Pink Panther , <http://www.fanpop.com/spots/pink-panther/images/17094592/title/pink-panther-photo>
- 2) Hsieh, S., Hornberger, M., Piguet, O., Hodges, J. (2011) Neural Basis of music knowledge: evidence from dementias. *Oxford Journals Online* , (10), 1093-1122.
- 3) Sotiropoulos, I., Catania, C., Pinto, L.G., Silva, R., Pollerberg, E., Takashima, A. et al (2011). Stress Acts Cumulatively To Precipitate Alzheimer's Disease-Like Tau Pathology and Cognitive Deficits. *Journal of Neuroscience*, 31(21), 7840-7847.
- 4) Neafsey, J., Collins, A. (2011). Moderate Alcohol consumption and cognitive risk. *Journal Of Neuropsychiatric Disease and Treatment*, 7 (1), 465-484

This newsletter was funded by the Dementia Collaborative Research Centre: Carers and Consumers as part of the Australian Government's Dementia Initiative © Alzheimer's Australia as represented by the Dementia Collaborative Research Centre: Carers and Consumers, 2011

DISCLAIMER:

The views expressed in this work are the views of its author/s and not necessarily those of the Australian Government.

Images on page one are copyright © of Lynton Crabb Photography. Used with permission. Unless otherwise stated, all other images are copyright © iStock Photo, used with permission



An Australian Government Initiative

