



**Accent Hearing**  
EXCELLENCE IN LISTENING

# The Listener

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## SUMMER Edition - 2018/2019

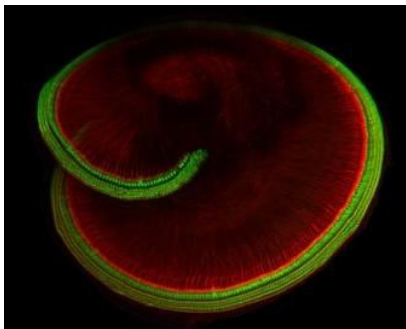
Grafton - Glen Innes - Inverell

[www.accenthearing.com.au](http://www.accenthearing.com.au)

Welcome to the Summer 2018/2019 edition of Accent Hearing's Newsletter *The Listener*. We explore helpful hearing tips on all hearing matters.



### Scientists reveal the identity of 'Hearing' Protein



The snail-shell-shaped part of the inner ear that houses the hair cells.

Scientists at Harvard Medical School say they have ended a 40 year-quest for the elusive identity of the sensor protein responsible for hearing and balance.

The results of their research reveal that TMC1, a protein discovered in 2002, forms a sound- and motion-activated pore that allows the conversion of sound and head movement into nerve signals that travel to the brain, a signalling cascade that enables hearing and balance.

Scientists have long known that when the delicate cells in our inner ear detect sound and movement, they convert them into signals. Where and how this conversion occurs has been the subject of intense scientific debate. David Corey, co-senior author on the study and the Bertarelli Professor of Translational Medical Science at Harvard Medical School says they believe our findings settle that issue for good and yield definitive proof that TMC1 is the critical molecular sensor that converts sound and motion into electrical signals the brain can understand.

The researchers say their findings lay the groundwork for precision-targeted therapies to treat hearing loss that occurs when the TMC1 molecular gate is malformed or missing.

The senses, including vision, touch, taste, pain, smell and hearing, help animals navigate the world and survive in it. The conversion of sensory input into signals that travel to the brain for analysis and interpretation is central to this process.

The "molecular converters" for most senses have been identified. The one for hearing, however, remained elusive, partly due to the hard-to-access anatomical location of the inner ear, within the densest bone of the human body and partly because of the comparatively few auditory cells available for retrieval, dissection and imaging. The human retina has a hundred million sensory cells, compared with a precious few 16,000 in the human inner ear.

The fact that evolution has conserved this protein across all vertebrate species underscores how critical it is for survival.

The ability to hear a sound and distinguish its meaning as a threat or a mere nuisance, for example, is crucial for biologic survival – think, hearing the sound of a bear approaching in the woods. But among many higher species, hearing is also important for social bonding and interaction like recognising different voices or changes in voice patterns and intonation. The exquisitely complex ability to detect changes in intonation begins with the opening of a tiny molecular gate in TMC1.

"We now know that TMC1 enables sound detection in animals ranging from fish to birds to humans," Corey said. "It is truly the protein that lets us hear."

From Science Daily, <https://www.sciencedaily.com/releases/2018/08/180822130959.htm>

**"Hearing is a Sense.  
Listening is a Skill."**

Sweetow & Henderson Sabes, 2006

## Smart glasses for the hard of hearing are changing a theatre in London

"Smart caption glasses" at the Royal National Theatre, is testing a pilot program for the technology for all performances of HadesTown and War Horse through October. It plans to make the glasses available for all of its performances during the 2019 season.

The headset, manufactured by Epson in partnership with the Royal National Theater, is heavier than normal reading glasses but much lighter than bulky virtual reality headsets like the Oculus Rift. The lenses look like a typical pair of glasses, but they fit inside a large gray casing that sits on the sides of your head. When you look through the glasses, closed captions scroll across the bottom of the augmented reality lenses.



## Testimonial Corner....

*Thank you Greg for your time and help last Monday. As you know, I am an 82 year old with industrial deafness from noisy sugar refineries. I have noticed definite improvements in hearing since you tweaked my hearing aids. In that, most people are now easier to hear and I get more words clearly with TV volume down from 20 to 11. The car travel is less tiring because of the noise is filtered better. I can hear gas hissing under a pot on the stove and the garden watering bore is not as obtrusive on hearing. I feel that you as an independent Audiologist, go out of your way to be helpful, concentrating on helping the customer, and not on the company's profit bottom line.*

*Michael Nicholls, Broulee NSW South Coast.....*

### Please note:

**All clinics will be closed from 4pm Friday 21 December and will re-open at 9am Monday 14 January 2019. Please call in or ring for batteries now if you require them over the holidays. All Staff at Accent Hearing wish you a Merry Christmas and a Happy New Year.**



## Guinness May Help Stop Hearing Loss

A pint of Guinness each day can help stop you going deaf, new research shows. Long thought to have medicinal properties, Guinness, thanks to its high iron content, may also combat hearing loss. The new research was published in the Journal of American Medicine. It seems Guinness has a beneficial impact when providing much-needed iron that may help to prevent deafness.

The research at Pennsylvania State University found that high levels of iron help stop hearing loss. The study of more than 300,000 people found a link between iron deficiency anemia (IDA) and hearing loss. More than 30 percent of the world's population is anemic and needs more iron and is in danger of hearing loss. Iron tablets do not help, recent research showed, due to DNA damage to blood vessels. Pennsylvania State University researchers found a lack of the mineral can cause sensorineural hearing loss – damage to the cochlea or nerve pathways. They also discovered it could also cause conductive hearing loss – problems with the bones in the middle of the ear.

In this case, Guinness might be a perfectly good substitute. So, it could be a case of "hear, hear" for Guinness fans, especially those a little hard of hearing.

## Dispose of Your Hearing Aid Batteries

Did you know Accent Hearing can take your used hearing aid batteries and dispose of them safely

**Accent Hearing Clinics - 1300 859 828**

- **GRAFTON** | L5 'The Link' 50 Prince Street, Grafton Shopping World, Grafton NSW 2460 (PO Box 1500).
- **GLEN INNES** | Glen Innes Chiropractic Centre, 113 Meade Street, Glen Innes NSW.
- **INVERELL** | Skybridge Financial Building, 129-135 Otho Street, Inverell NSW.

*Accent Hearing is independent & is locally owned. Our clinician Greg Butcher is an Accredited University trained Audiologist; a full CCP Member of Audiology Australia and Independent Audiologists Australia; and a qualified Government & Medicare Hearing Services Provider.*