

Ear Science Institute Australia 2016 - 2017

Ear Science Institute Australia

A not-for-profit organisation, providing ear and hearing health care, education and research. Based in Western Australia, Ear Science reinvests funds into medical science research, providing each of its patients with the knowledge that they are part of the global pursuit for a cure for hearing loss.



VISION

A centre of excellence, enhancing the lives of people with ear and hearing disorders.

MISSION

We are dedicated to helping people with ear and hearing disorders, through research, education, prevention and treatment.

VALUES

Excellence.

We are motivated to exceed expectations and discover more. We celebrate our achievements that bring professional respect and global recognition.

Success.

Our independence and experience allows us to devise and tailor solutions to provide people with the most appropriate care. Our leadership position inspires collaborative work with other renowned research facilities, to maximise and deliver the best results.

Innovation.

We challenge boundaries and technologies to lead the field, and think outside the square. Our experience and drive ensures we remain at the forefront of our profession, to discover new and better outcomes.

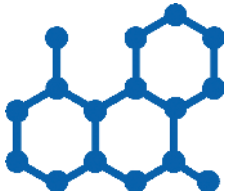
Authenticity.

We remain honest, open and approachable always, with our colleagues and our patients. Our integrity ensures we promote and provide patient-centred clinical care. We foster and encourage a supportive environment for all.

2016 - 2017 Highlights



\$4 million
research grant
awarded



\$1.1 million
raised for hearing
research



84
New
publications



Moved to
new
research
laboratory



Established in 2001 by Winthrop Professor Marcus Atlas, Ear Science Institute Australia is an independent not-for-profit organisation, dedicated to improving the lives of people with ear and hearing disorders.

Ear Science's approach is multi-disciplinary in nature, employing skills from diverse fields such as otolaryngology, audiology, engineering, computer science and molecular and cellular sciences.

Ear Science provides internationally recognised clinical services through our Lions Hearing Clinic and Ear Science Clinics. The Clinics have served over 50 000 patients and provide a complete continuum of care.

Ear Science's research pillar is focused on translational research for the improvement and creation of hearing health solutions.

Through the activity of Ear Science's research and clinical service departments, Ear Science has accumulated important insights into new and developing methodologies and best practice tactics for hearing health. Ear Science Education shares this information to the medical community through education and surgical courses at our state-of-the-art laboratory and through research publications.

Ear Science Community works actively in the local, national and international community to spread hearing awareness and promote hearing health. This year Ear Science reached over 1.5 million people online through social media. We also delivered over 500 pre-owned hearing aids to countries in need including Kenya, Indonesia and the Philippines.

Research at the core of ear health.



Ear Science Institute Australia is a multi-faceted medical research facility that conducts and translates leading hearing research. From these foundations Ear Science provides world class clinical care and educates society on the latest hearing health findings.

“At Ear Science we are able to care for all aspects of your hearing health.” From initial assessments at our Lions Hearing Clinics through to cochlear implants at our Ear Science Clinic, and everything in between,” Ms Bellekom said.

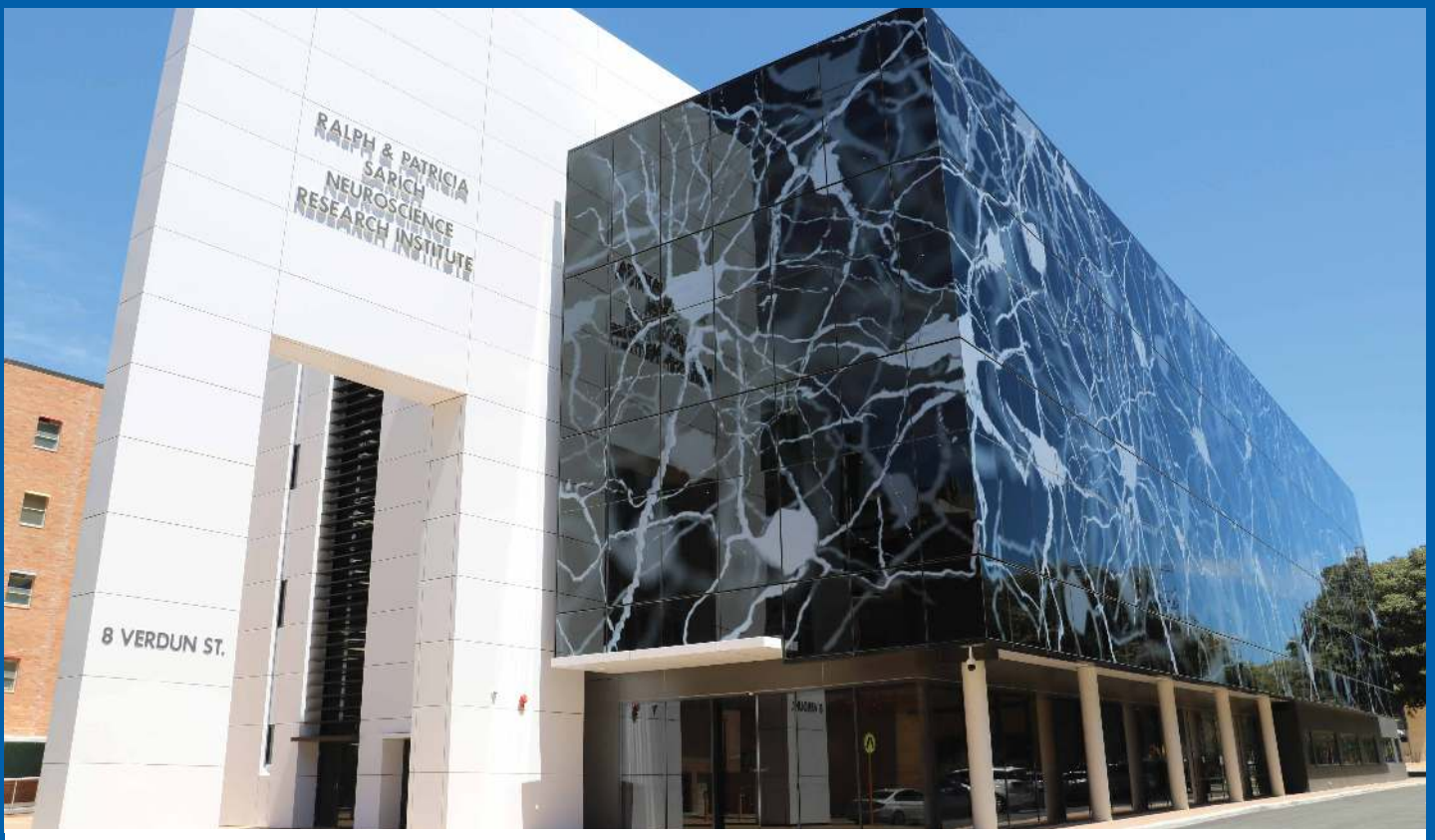
“Research, however, is at the heart of everything we do. Our clinics support and fund our research and the findings are put back into our clinical service, ensuring that we are always working with the latest evidence-based information to provide the best care possible.”

Ear Science has recently joined the newly opened Ralph and Patricia Sarich Neuroscience Research Institute to further collaboration in research.

The brainchild of Professor Bryant Stokes and supported by the Sarich family, the Wheatley family, LotteryWest, the WA Government and more, this is the first time researchers from different organisations have joined forces in Perth for the betterment of neuroscience.

“For the first time ever, Lions Hearing Clinic will be located side-by-side with our scientific research teams,” Ms Bellekom said.

“This provides a unique opportunity for researchers to develop therapies, devices, pharmaceuticals and technologies to help those with hearing loss.”



LIONS HEARING CLINICS

2016 - 2017 Highlights



2

New clinics
opened



13

Hearing
clinics
across Perth



New CMS
developed



8

Audiologists
join team



As part of the world-class research centre Ear Science Institute Australia, Lions Hearing Clinics are unique.

Lions Hearing Clinics, Australia's leading not-for-profit hearing clinic, bring together research and clinical excellence to deliver the best possible care to people with hearing loss.

"As a not-for-profit organisation we have always been and remain completely commission free," Head of Lions Hearing Clinics, Lize Coetzee explains. "Our clinicians always put our patient's best interests first and provide the highest quality care."

This philosophy has resonated with patients, and since starting as a single clinic in 2001, Lions Hearing Clinics have expanded to thirteen different locations throughout Western Australia.

"Funds generated from Lions Hearing Clinics are reinvested back into research at Ear Science Institute Australia," says Ear Science CEO, Sandra Bellekom.

"We have discovered that our patients love supporting hearing research. They appreciate that funds go to research and are not paid in commissions to clinicians."

"Patients benefit from visiting Lions Hearing Clinics by receiving care from qualified clinicians founded on the latest research findings," says Ms Coetzee.

Patient at front of mind in all decisions.

Our Audiologists know first hand the life changing effects of hearing loss. Our Head of Clinical Services, Lize Coetzee, was inspired to pursue a career in audiology by her brother Will, who has a moderate to profound hearing loss.

“My first experience with the hearing industry was as a child at the diagnosis of my brother’s hearing loss. He, received poor treatment when we initially found out about his hearing loss,” she said.

“The lack of empathy and professionalism from the clinician spurred me to become an audiologist and ensure this never happens to anyone else.”

Today Ms Coetzee manages the Lions Hearing Clinics across Western Australia.

“Our Lions Hearing Clinics only employ qualified clinicians to ensure we provide the best care. We never pay commissions to our team so that we can always stay focused purely on the needs of the person in front of us,” she said. “This lets us always provide the care that’s best for them.”

“I know what it feels like to be on the other side and the complex emotions that stir after discovering your family member has a condition that will change their life.”

“My experience with my brother inspires me everyday to ensure Lions Hearing Clinics provide the highest quality patient-focused care to all of our patients.”

“If our clinics were around when we were seeking help for my brother, I know the situation would have been very different,” she said.



Ear Science Clinics

2016 - 2017 Highlights



Fitted
900th
hearing
implant



Launched
3rd
hearing
implant clinic



New CMS
developed



Balance
physiotherapist
joined team



As the largest cochlear implant unit in Western Australia, Ear Science Clinic provides a seamless implant service for adults and children.

Ear Science Clinic's multi-disciplinary team of ENT & hearing specialists, implant audiologists, balance audiologists, speech pathologist, balance physiotherapists, psychologists and radiologists, support each patient to achieve the best hearing outcomes.

Ear Science Clinic specialises in hearing and balance services - particularly providing surgical solutions for hearing loss (cochlear implants and bone conduction implants), as well as advice and therapies for balance-related conditions.

With over 100 years of combined experience in implantable hearing technology, and strong relationships with leading implant technology manufacturers, Ear Science Clinic works tirelessly to provide the best hearing solution for every individual patient.

To ensure all patient's are receiving clinical services based on the latest hearing research Ear Science Clinic is strongly committed to ongoing learning and professional development.

Our team conducts research projects, and Ear Science's research on hearing implants has been presented all over the world, including the World Congress of Audiology.

Ear Science Clinic is dedicated to supporting each patient throughout their entire hearing journey. Clinicians provide ongoing support following implantation, and have created specialised mentor groups to help each patient. These groups provide patient's the opportunity to meet other people with hearing implants, discuss their experiences and learn strategies to manage their hearing.

With research and clinical excellence as the foundation of our service, Ear Science Clinic changes lives for the better.

Life with new rhythm

A keen lover of music, businessman and drummer Matthew Durdin is catching up on the tunes he's missed since his hearing significantly deteriorated several years ago.

A new cochlear implant delivered to Mr Durdin by Ear Science Institute Australia has allowed him to hear the music in every day – like birds chirping – that he was missing out.

“It’s been a really big deal for me because I play music, which is stuck in the 80s and 90s back when I had good hearing,” Mr Durdin said.

“Since having the implant I’ve been able to play the piano and guitar and have it be so vibrant and clear – it’s not dull anymore.”

Prior to receiving his cochlear implant, Mr Durdin had been wearing a behind-the-ear hearing aid, which he swapped between ears. He never enjoyed wearing two at once, but since having one cochlear implant is extremely eager for the second.

Senior Implant Audiologist, Ronel Chester-Browne, said it had been heart-warming to see Mr Durdin hear with his implant and be fully able to listen to the music he loves.

“Matthew’s cochlear implant has and will continue to provide life-changing benefits. Like so many others with cochlear implants, it will improve the quality of life for both him and his family.”

Using the implant and assistive technology, he is now speaking with his family on the phone which he has been unable to do for 10-15 years.

“On average people wait 12 years before getting a cochlear implant. As Matthew has a young family, it is great that he received his implant sooner rather than later.”



BASIC RESEARCH

2016 - 2017 Highlights



\$4 million
research grant
received



6

New scientists
join team



12

New
publications



2

International
researchers
join team



Ear Science Institute Australia's basic research team investigates the biology of the hearing system at a molecular and cellular level for the development of new treatments.

With an overall vision of finding a cure to hearing loss, Ear Science's laboratory-based investigations include studies on tissue engineering of autologous human tympanic membranes for repair of chronic ear drum perforations and development of human cell models for studying regenerative cell biology in the middle and inner ear.

A key project for Ear Science's basic research team is investigating if stem cells can cure hearing loss.

Our researchers are finding new ways to turn stem cells into the ear cells that are missing in patients with hearing loss. If successful our researchers will be able to replace the damaged cells and restore hearing.

"Imagine if instead of a hearing aid, you received a cochlea hair cell transplant to cure your hearing loss. That is what we are aiming for," explains Associate Professor Rodney Dilley, Head of Basic Research at Ear Science Institute Australia.

"Our research teams are always focused on translational research, the type that delivers an outcome that can help the patient," Ear Science Director and surgeon scientist Professor Marcus Atlas said.

As a not-for-profit organisation, funding for research at Ear Science comes from reinvested funds from other areas of the institute, from grants and support from donors through its charity the Gift of Hearing Appeal.

Silk provides cure for painful burst eardrums

Every year millions of people suffer from burst eardrums and tens of thousands of people die from Chronic Middle Ear disease. In a world-first trial, Australian researchers will be closer to helping these people by combining science and silkworms to create a tiny implant known as ClearDrum[®], which is similar in appearance and size to a contact lens.

Made out of biocompatible silk, the ClearDrum implant is placed within the ear so that the patient's own cells grow on it and regenerate their own eardrum.

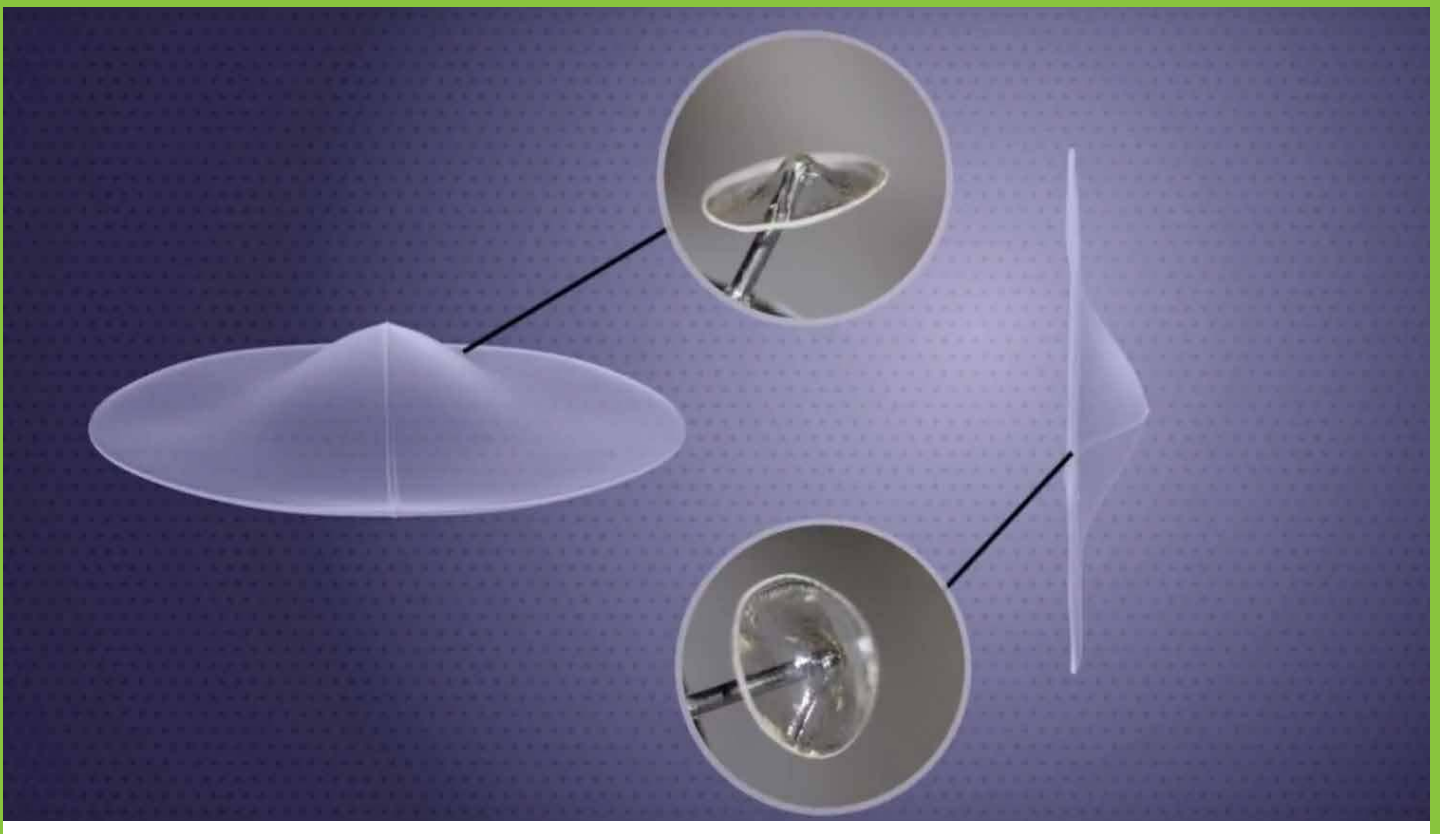
After extensive testing, the implant shows the ability to transmit sounds better than many other graft materials currently used.

ClearDrum is expected to be less expensive, less invasive and promises quicker healing of the eardrum than current surgical procedures treating chronic perforated ear drums.

It is a transparent and strong device. The surgical procedure to implant ClearDrum is less complex than current procedures and could reshape the 330 000 surgeries treating chronic middle ear disease around the world.

Western Australia's own Nobel Laureate Professor Barry Marshall commented that "ClearDrum is an example of the translational research and world-first innovations being conducted here in Perth."

The ClearDrum project is led by Perth based surgeon scientist Professor Marcus Atlas from Ear Science Institute Australia and Ear Sciences Centre at the University of WA, in collaboration with Professor Xungai Wang and fibre experts at Deakin University's Future Fibres Hub.



CLINICAL RESEARCH

2016 - 2017
Highlights



Joined Western
Australian Health
Translation
Network



2

New scientists
join team



72

New
publications



Hosted World
Hearing Day
Research
Symposium in
Singapore



Ear Science Institute Australia's clinical research team investigates clinical outcomes, epidemiology, improving the delivery of ear and hearing health services and translating findings into clinical practice.

Clinical research at Ear Science strives to improve the quality of care for all people with hearing loss. Our multi-disciplinary team focusses on translating the findings of research into clinical practice. This is achieved through the development of treatment and management protocols, understanding barriers to effective treatment, testing and creating devices, developing surgical techniques, and epidemiology.

Ear Science's clinical research team works closely with the ear surgeons, audiologists and scientists from our clinical services team, such as Lions Hearing Clinics and Ear Science Clinic. It is also associated with the Ear Sciences Centre, School of Medicine, The University of Western Australia.

Our Clinical Research team has a diverse range of research projects including investigating the link between hearing loss and dementia, examining the mental wellbeing of kids with hearing loss, studying remote fitting of hearing aids, reviewing hearing device management and conducting epidemiology studies.

In 2016, ear, nose and throat (ENT) surgeon and scientist Professor Peter Friedland joined Ear Science as Head of Clinical Research. Originally from South Africa where he was Nelson Mandela's personal ENT specialist, Prof Friedland later moved to Perth where he holds multiple positions at hospitals and universities.

In 2017 Ear Science, together with Jurong Health, hosted the inaugural World Hearing Day Research Symposium in Singapore. The symposium brought together experts from around the world to showcase new and ground-breaking research in hearing health.

Research integral to defeating dementia

Recent and ongoing research into the link between hearing and cognition, or the brain's ability to process and interpret thought, has been a major focus of the work undertaken by Ear Science's clinical research team and has directly impacted our understanding of dementia.

It has been made possible through a collaboration with the Australian Alzheimer's Research Foundation and Edith Cowan University, who have since joined Ear Science in the new Ralph and Patricia Sarich Neuroscience Research Institute to further critical research such as this.

"The study, though small, involved 49 people over six months and was extremely heartening as there has previously been a rarity of studies with patients over the age of 60 tested. This is the first interventional longitudinal study on a pilot basis in Australia," Dr Dona Jayakody, the lead researcher on the project, said.

The research into hearing loss and its effects on cognition identified significant improvements in cognition when hearing loss was treated and a decrease in depression, stress and anxiety when hearing was improved.

"The most plausible reason for this is that when people are better able to perceive and understand speech with less mental effort, it causes less stress and drain on the brain reserves and provides greater capacity for memory and other executive tasks," Head of Clinical Research, Prof Friedland said.

"Cognitive energy can then go into other tasks with the likely reason for improvement being the neuroplasticity of the brain."

Ear Science's Clinical Research are in the process of conducting a larger longitudinal study to further investigate the link between hearing loss and dementia.



EDUCATION

2016 - 2017 Highlights



Taught every
medical student
in Western
Australia



International
surgeons flew
in for our
training



Professional
development
courses provided
for allied health
professionals



Laboratory
was used to
translate
research in
clinical trials



Ear Science Institute Australia delivers world class education and training through our state-of-the-art laboratory facility within our clinical headquarters in Subiaco.

Specialising in assessment, diagnosis and treatment of disorders of the head and neck, Ear Science provides education to medical professionals who come from all over the world to ensure they can deliver the best evidence-based care.

Locally, Ear Science provides hearing education to every medical student in Western Australia. This is achieved through ongoing partnerships with the universities and their medical students.

In 2016/2017, over 500 medical students received hands on, practical curriculum based training. Ear Science brought together ENT surgeons, audiologists, speech pathologists, instructors and public health specialists to deliver this training.

Ear Science's specialist laboratory uses the latest technology to provide scenario based training for allied health professionals. Using state-of-the-art simulation equipment, our experienced clinicians provide fully accredited professional development courses for GPs, audiologists, nurses, physiotherapists and paramedics.

Ear Science partners with other organisations to develop and deliver bespoke surgical training courses. Aimed at surgeons these specialised courses allow qualified specialists to learn new skills and techniques in a world-class simulation environment.

Training at the cutting edge

In a world where advancements happen on a regular basis, trying to keep on top of what is new, current and best practice can often be a challenge. It is a challenge being tackled head on by Ear Science Institute Australia at its world-class educational facility.

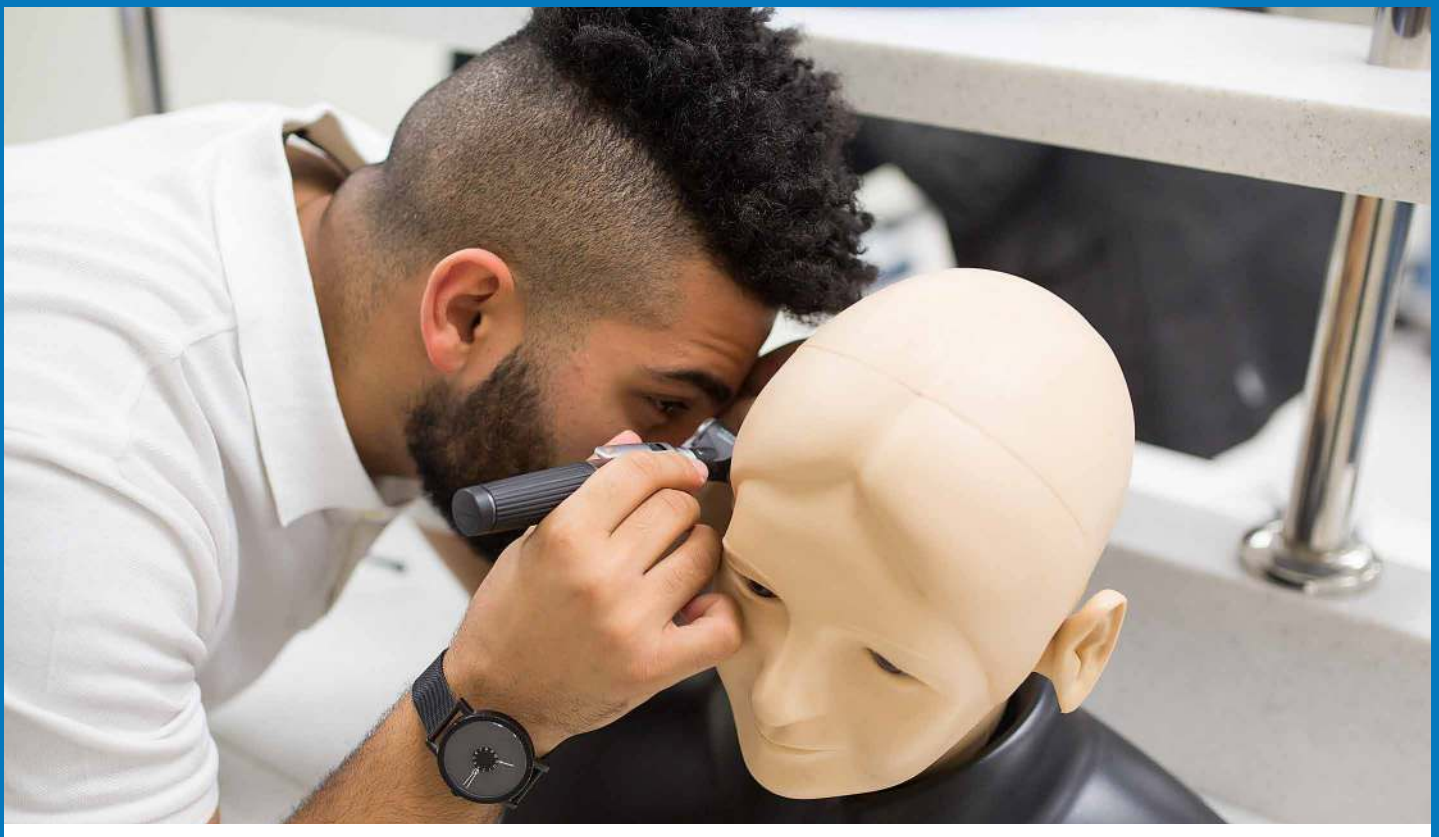
Ear Science's education facility offers a range of courses from simulation training to high skill surgical training to online courses with a focus on ear and hearing health.

Hearing is something that is often taken for granted, however in the medical field we need to constantly be aware of the hearing capabilities of our patients, from their ability to hear emergency services after a car crash to a GP recognising the need to face a patient during an appointment to ensure they can read lips.

One of the ways Ear Science is working to keep up to date with the continual advancements in technology and processes is through the incorporation of research into the current teaching curriculum.

As soon as research findings have been proven and accepted as the new process or procedure for optimal patient care, they are included within our course materials.

Education is increasingly being linked to our research arm, helping to train the next generation of doctors to carry out the work of hearing health and spread hearing health awareness.



2016 - 2017 Highlights



500

Hearing aids
donated to
countries
in need



Provided ear
health services
to remote
Australian
communities



1.5 +
million people
reached online.



Delivered
hearing services
through Lions
Hearing Bus



As a not-for-profit medical research organisation, Ear Science hosts a range of regular community initiatives to enhance the lives of people with ear and hearing disorders. Led by the team at Ear Science Community, all departments at Ear Science actively work within the local, national and international community, to promote the importance of prevention, treatment and management of ear and hearing disorders.

Every year a number of Ear Science's multidisciplinary team travel to remote and rural communities to deliver much needed ear and hearing services. Remote and rural Australian communities have some of the highest levels of ear disease and associated hearing loss in the world, with rates up to ten times higher than non-indigenous Australians. During these visits our specialists provide ear and hearing services to remote communities and empower local community members to maintain and self-manage their ear health requirements.

On a local level, Ear Science delivers hearing services throughout Perth using the Lions Hearing Bus. A collaboration between the Lions Hearing Clinics and Lions Hearing Foundation, Ear Science Community provides businesses and industries throughout Western Australia with Work Cover WA accredited hearing screenings.

To promote hearing education and awareness internationally, this year Ear Science launched a new community initiative, via social media. Starting with Facebook and LinkedIn, Ear Science's online hearing awareness and education campaigns have reached over 1.5 million people worldwide. From China to Bulgaria, people from all over the world have connected with Ear Science online and engaged with Ear Science's research. The power of social media has allowed Ear Science to connect with millions of people internationally, and over the course of the year, Ear Science has built a thriving online community.

Lions Hearing Aid Bank helps countries in need.



According to the World Health Organization (WHO), over 360 million people globally are affected by a 'disabling hearing loss' - meaning everyday sounds, like light traffic and general conversational speech, cannot be clearly heard.

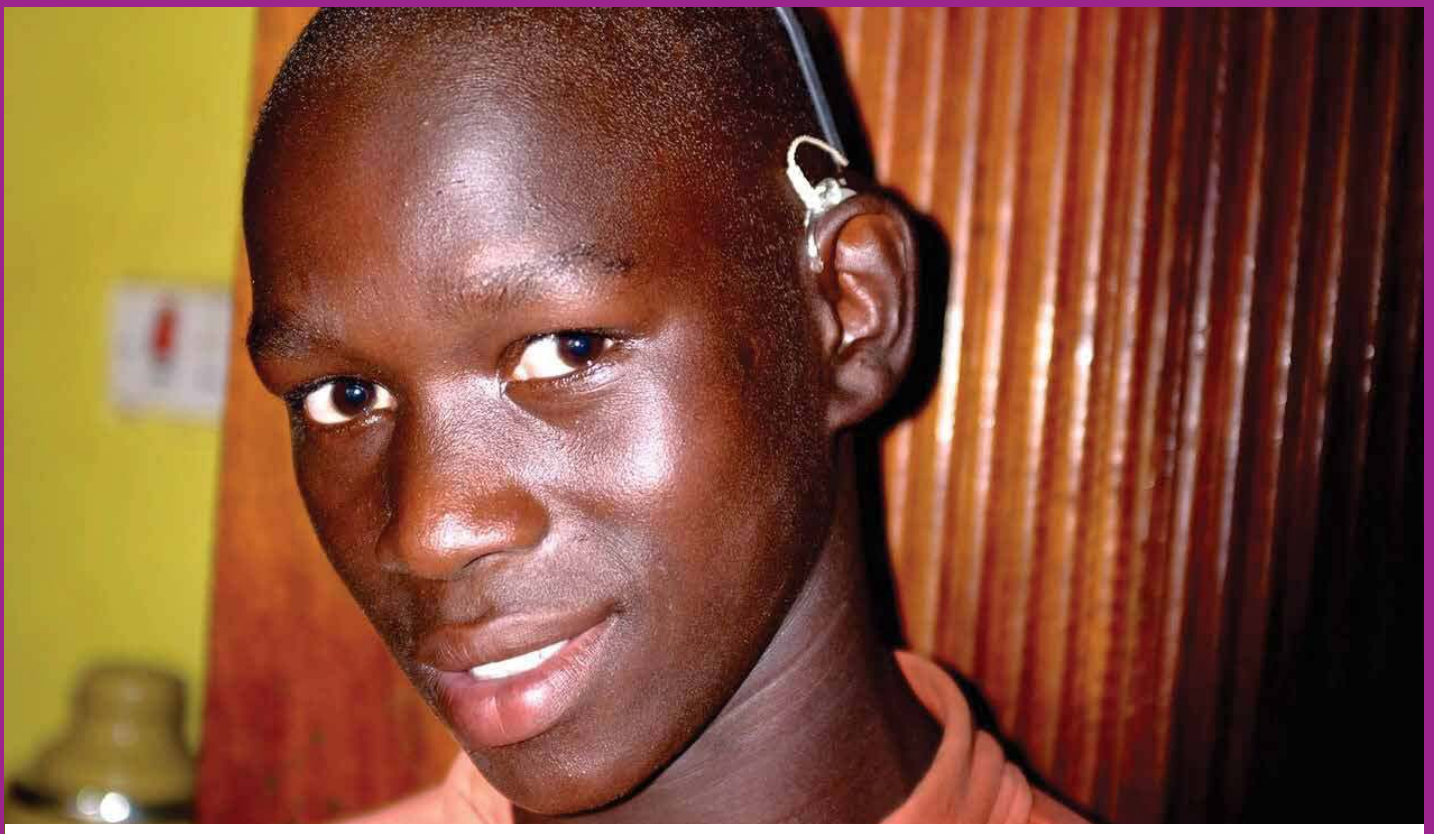
Affected groups are not distributed equally. WHO's research demonstrates that developing countries have the greatest prevalence of hearing impaired people, particularly through rural areas across South East Asia, the Asia Pacific and sub-Saharan Africa.

To help these people Lions Hearing Clinics, in collaboration with Lions Hearing Foundation, donate thousands of pre-owned hearing aids to areas in need through a joint initiative called the Lions Hearing Aid Bank. The hearing aids are donated to people in need across the world and in particular to developing countries such as the Phillipines, Indonesia and Kenya.

The hearing aids are donated to children via healthcare professionals within schools, orphanages and community centres.

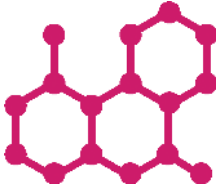
"Through this one very practical programme the Lions Hearing Aid Bank is helping many children (and families) access hearing aids that would not have been available otherwise and allowing them to hear in class and gain an education", our CEO Sandra Bellekom said.

"Hearing loss often results in people becoming isolated and less likely to interact with family and friends causing social divides," said Ms Bellekom. "With the support of Lions, we are helping to address these issues and making a real difference in the lives of thousands of people."



GIFT OF HEARING

2016 - 2017 Highlights



\$1.1 million
raised for hearing
research



100%
of donations go
towards research
and initiatives



Ray Martin
provided
keynote speech



Kate
Ceberano
provided
musical
entertainment



In the seven years since it was established, Ear Science Institute Australia's Gift of Hearing Appeal has personally touched the lives of many Western Australians, and has allowed Ear Science to conduct research that will help millions of people with hearing loss around the world.

One hundred per cent of the Gift of Hearing Appeal's funds, raised through items such as charitable donations and auction funds, will go towards our research and community initiatives, and particularly, to worthy individuals who are in personal need of the Gift of Hearing, to maximise their quality of life, and to realise their life goals and ambitions.

The Gift of Hearing Appeal's flagship event, the charity dinner, brings together Perth's most generous philanthropic business communities to raise funds for hearing.

The 2017 dinner was hosted in Crown Tower Perth's Ballrooms, with addresses by Nobel Laureate and Ear Science Patron Professor Barry Marshall, and entertainment from Kate Ceberano and Ray Martin.

The 2017 Gift of Hearing Appeal charity dinner had over 400 attendees and through the generosity of the Gift of Hearing Appeal donors, raised a record \$1.1 million for hearing research.

Ear Science Institute Australia expresses its heartfelt thanks to all of its donors and the philanthropic businesses which regularly support and sponsor the event.

A gift unlike any other.



Ear Science Chairman John Schaffer has been involved with Ear Science's Gift of Hearing Appeal since its beginning.

"The Gift of Hearing Appeal is close to my heart," he said.

"I've witnessed the moment we turned on a child's cochlear implant for the first time and I watched her eyes light up as she heard her mother's voice. Being able to see the impact first-hand is something that stays with you and encourages you to want to do more.

"It is truly inspirational the things modern science are able to achieve now, but imagine what the future holds. And it is that future we want to influence.

"Through research we know we can impact more lives and through collaboration, such as at the new Sarich Institute, we can go further and get there faster.

It is through the support of our Gift of Hearing Appeal donors that we are able to achieve such things and impact so many lives."

"As Chairman I know how the funds are distributed and that 100 per cent of donations will go directly to our 2017 Gift of Hearing Appeal, without anything coming off the top for administration or similar.

Ear Science's Gift of Hearing Appeal has the support of many of Perth's most philanthropic families.

Mr Schaffer is a large supporter of the Appeal and the business he runs, Schaffer Corporation, is also a proud supporter.

Cochlear Limited	Principal	Principal	Principal	Principal	Principal	Principal
John & Debbie Schaffer	Principal	Principal	Principal	Principal	Principal	Principal
McCusker Charitable Foundation	Principal	Principal	Principal	Principal	Principal	Principal
Quadrant Energy - Santos Devil Creek Domestic Gas Plant	Principal	Principal	Principal	Principal	Principal	Principal
Sarich Family	Principal	Principal	Principal	Principal	Principal	Principal
Sonoca	Principal	Principal	Principal	Principal	Principal	Principal
Wheeler Family Foundation	Principal	Principal	Principal	Principal	Principal	Principal
PATRON (\$10,000 and above)	2016	2015	2014	2013	2012	2011
Automotive Properties Pty Ltd			Patron	Patron	Patron	
Brian & Jill Sanson						
Brinkhaus Jewellers	Patron	Patron	Patron		Patron	
Chris & Andrea Sonuval and Chantelle & Thomas G. Grove	Patron	Patron				
Coor Architects	Patron	Patron			Partner	Partner
Daniel & Heather Smalley						
Emirates						
Energy Management Pty Ltd	Patron	Patron			Partner	Partner
Everglades & Despo Libs	Patron	Patron				
Gift of Hearing Swim Team	Patron					
GW Resources		Patron				Patron
Harold Kinross						
Harry & Belje Atlas & Family	Patron	Patron				
Ian & Jillian Green	Patron	Patron				
Ivan & Kathleen Huntlich	Patron	Patron				
Jandakot Airport (previously Kier Der Foundation)	Patron	Patron			Partner	Partner
Jem Ltd						
Lions Hearing Foundation of WA						
Lister Gallery						
Marchese Family						
Mark & Core McKenna						
MCC-S, Inc. (A US Patent Attorney)						
Minter Ellison						
Olsson						
Patoka Family Trust						
Paul & Jenny Simpson						
Paul Blackburn						
Philip & Janice Fisher						
Phonak/Unison						
Santos Limited						
Schaffer Corporation Limited	Patron					
Stravicki Group	Patron					
The Stan Perron Charitable Trust						
Tony & Geoffrey Lennon	Patron					
Tony & Mavis Pock	Patron					
Trahar Family	Patron					
Victor & Deborah Tama	Patron					
Willy & Mimi Packer	Patron					
Whays						
PARTNERS (\$5,000 and above)	2016					
Adrienne & Barry Marshall	Partner					
AHA (WA)						
ABC (The Australian Steel Company)						
Atlas D'Almeida Foundation						
Aurison						
Australian Diamond Tools						
Bateman Architects						
Beck Authority						
Bowen Foundation						
Brett & Anna Robertson	Partner					



Ear Science Institute Australia

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