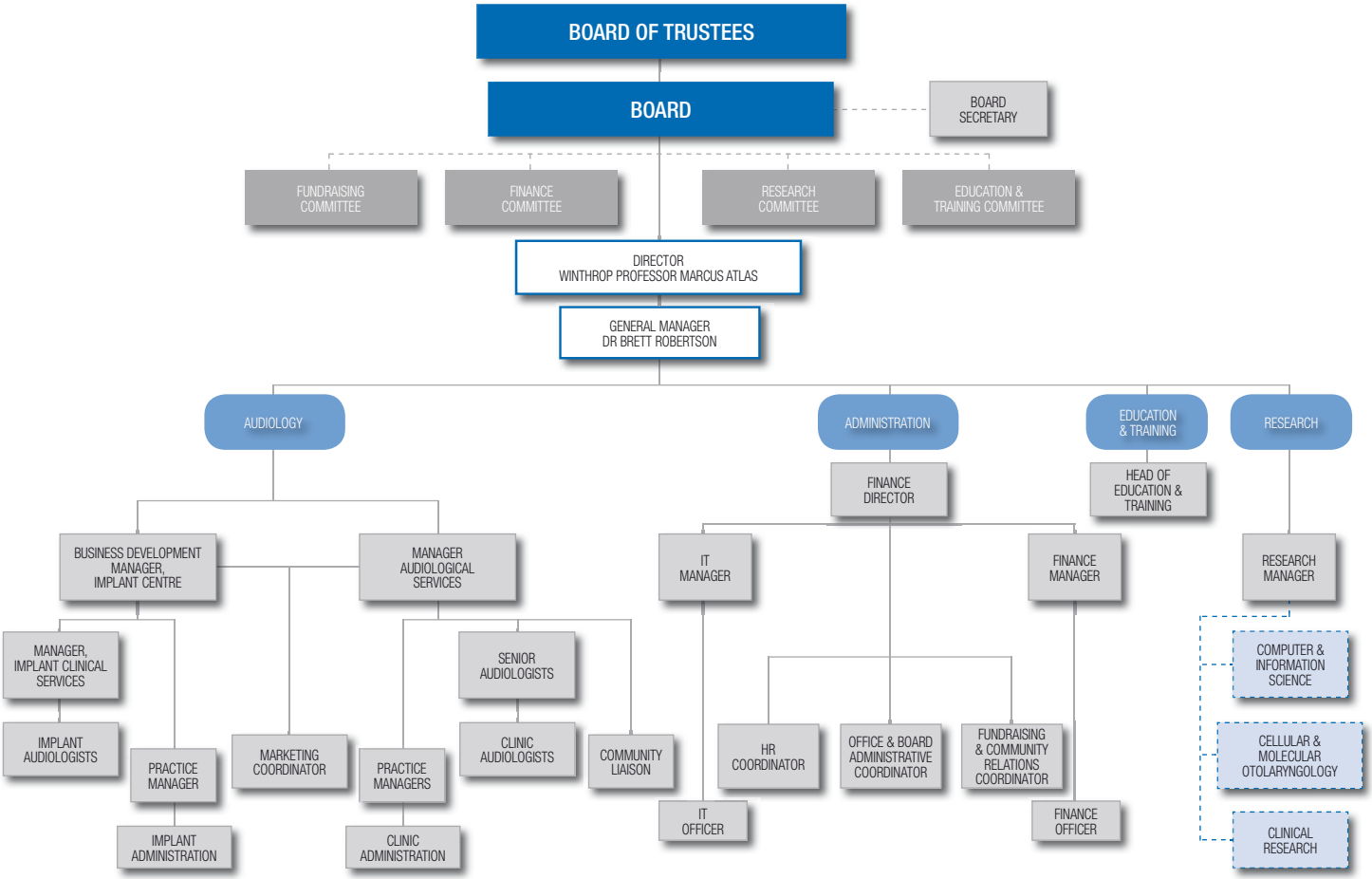
annual report

ear science institute australia

2010

milestones and organisation chart

- Completion of and relocation to the 'George Jones Family Centre'.
- Completion of the 'Break the Silence' Capital Fundraising Campaign.
- Receipt of major funding grants.
- 40% increase in audiological staff.
- Volunteer programme.
- 'Cheers for Ears' Noise Induced Hearing Loss prevention programme.
- Master Courses in surgical training.
- Completion of multicentre surgical trial in conjunction with The HEARing CRC.



contents

about ear science institute australia

The Ear Science Institute Australia (ESIA), an independent not-for-profit organisation, is dedicated to improving ear and hearing outcomes through education and translational research (bed-to-bench-to-bed) that is multi-disciplinary in nature, drawing on skills from many fields such as otolaryngology, audiology, engineering, computer science and molecular and cellular sciences. As well as having strong links between researchers and clinicians, ESIA also has a strong educational and training mandate. Through its dedicated focus, expert staff and established national and international networks, ESIA is uniquely placed to address the issues faced by the one in six Australians who suffer from hearing loss.

First established in September 2001, ESIA was originally named the Lions Ear and Hearing Institute (LEHI), which recognised the work of the Lions Club members in Perth, particularly within the Lions Hearing Foundation, which worked for a number of decades in hearing screening. ESIA continues to have a close relationship with the Lions Hearing Foundation and the Lions Club membership.

The Institute's Director is Winthrop Professor Marcus Atlas, who was appointed as the Foundation Professor of Otolaryngology at The University of Western Australia (UWA) in 2001. His chair is funded by the Garnett Passe and Rodney Williams Memorial Foundation. Winthrop Professor Atlas also heads the Ear Sciences Centre in the School of Surgery at UWA. ESIA is affiliated with a number of key local, national, and international organisations, including UWA, key Western Australian teaching hospitals, the Western Australian Department of Health and international medical groups.

ESIA Mission Statement

ESIA is a community-focused partnership between research and clinical services dedicated to helping people with ear disorders improve their quality of life.

ESIA Vision

To provide world-class facilities and services for research and clinical activities aiming to improve the quality of life for people with ear disorders.

Our activities

(i) Delivery of tertiary ENT and audiological services, focusing on middle ear surgery, hearing implants, complex hearing loss, tinnitus, balance and paediatric services.

(ii) Research programmes in telehealth, hearing loss, epidemiology, audiology, otology and tissue engineering, focusing on projects that translate research into clinical practice.

(iii) Education for:

(a) undergraduate and post-graduate students through our association with UWA;

(b) training of surgeons through our association with various teaching hospitals and the Australasian College of Surgeons; and

(c) community and professional groups through public meetings and involvement with hearing-related support groups and industry.

Our Principles

- To foster a close, collaborative working environment between clinical, research and education activities.
- To provide high quality clinical care for people with ear disorders, and encourage clinical professionals to participate formally in research and educational activities.
- To undertake research that is focused on clinical outcomes that address ear issues of national and international significance, and attract high calibre researchers from a wide array of scientific endeavours.
- To play an important role in the community in raising awareness of treatment for hearing conditions, the prevention of hearing loss, and the importance of hearing to quality of life.
- To provide a supportive and professional environment for all employees.


ear science institute australia

chairman's report

Welcome to the 2010 Annual Report of the Ear Science Institute Australia Inc (ESIA).

The financial aspects of this Annual Report relate to the financial year ended June 30, 2010; however, the reports on current activities are up to February 2011, and take into account the official opening and naming of our building at 1 Salvado Road, Subiaco.

The many significant achievements of ESIA are outlined by Winthrop Professor Marcus Atlas in the Director's Report.

As Board Chairman, I have been honoured to work together with our Director, Trustees, Board members, Committee members, management, staff and volunteers in the direction, governance, and activities of ESIA. Each and every one has provided significant expertise, support, dedication and effort to reach our achievements. Thank you to you all.

Special mention is deserved for the contributions of the following people over the past 18 months:

- Winthrop Professor Marcus Atlas, ESIA Director, whose reputation, vision and drive are an inspiration to us all;
- Mr George Jones, ESIA Trustee, who has been extremely generous financially as well as providing his drive and expertise. We are very proud that our building will carry the name 'The George Jones Family Centre';
- Mr John Schaffer, ESIA Trustee, for his business expertise and financial generosity;
- Mrs Debbie Schaffer, for her financial generosity and magnificent efforts and assistance in our fundraising campaign activities; and
- Dr Brett Robertson, ESIA General Manager, for his diligence, caring, and outcomes in representing ESIA across a broad range of matters.

The significant support and generosity of our donors was gratefully acknowledged as part of the official opening of the building on February 25, 2011. The names of the individuals, foundations and companies that contributed to the 'Break the Silence' Capital Fundraising Campaign for our new facility are proudly displayed within the main foyer of the building on our donor honour board which was erected as part of our opening celebration. Thank you to you all for making reality of our vision for a purpose-built facility.

Thank you also to the Lions Hearing Foundation and Lions Club members for their founding and ongoing support to ESIA, and to Lotterywest for their generous funding.

With our purpose-built facility now in place, the emphasis going forward is the continued efforts of our researchers to achieve breakthroughs to bring an improved quality of life to people with ear and hearing difficulties.

With great sadness we acknowledge the passing of our past Chairman and Board member Professor Val Alder/Johnstone. Val was a great friend of ESIA and combined prodigious intelligence with compassion and understanding. We are honoured to celebrate her contribution to ESIA and academia in this publication.

Graeme Jolley
Board Chairman

director's report

As we approach the 10th Anniversary of the Ear Science Institute Australia (ESIA) in September 2011, we look back with enormous pride on our significant achievements, and we look forward to the exciting scientific breakthroughs that our work will undoubtedly bring.

Our relatively 'young' organisation has already made its mark in the international community, and this ten-year milestone is a chance to reflect on the brave and focused vision we maintain. ESIA has become a respected research institution, with clinical and surgical achievements demonstrating our clear capability to lead the way in identifying and treating ear, hearing and balance disorders.

Foremost among our achievements has been the development of our exceptional new home at 1 Salvado Road, Subiaco. Located in the heart of a major medical precinct in Perth, Western Australia, the new building has enabled us to reach many of our key objectives through bringing our scientists, researchers and clinical staff together under the one roof. This long-hoped-for opportunity for true collaboration has proved itself in every sphere of our work, and particularly in the delivery of successful outcomes for children and adults who suffer from ear and hearing disorders.

ESIA's new building has also allowed us to develop the basis of a sustainable income for the Institute that will contribute significantly to funding research into solutions for ear and hearing disorders. In moving the Institute into its new home, we have been very fortunate to find like-minded and generous people who have assisted us in many ways, including financial support as well as their own time and expertise. A shining example of this spirit of generosity is Mr George Jones, who recently announced to our Board that he would make a very large donation to complete the 'Break the Silence' Capital Fundraising Campaign for the new building. I met George in July 2005. I remember that day because it was going to change all of us at ESIA in a very profound way, not only because of his generosity to ESIA. For me his generosity of time, interest and experience has been to my greatest advantage. It is very fitting that the Jones family name will be inscribed on this building and we will wear it very proudly. We will be forever grateful to the many valued individual donors and organisations such as the George Jones family, the Lions Hearing Foundation and Lotterywest, which have made this dream achievable.

As Director of the Institute, I must emphasise how humbling it is to see the relationships that have developed as a result of this major achievement. We now have a private hospital on the first floor that is owned, in the majority, by many of Perth's leading surgeons. This facility has attracted over 10 key surgeons who regularly perform ear, nose and throat procedures. The benefits of this close association will pay dividends in years to come. The hospital and the ESIA clinical floor cater for patients of all ages, including those with even the most complex disorders. The Lotterywest Hearing Discovery Centre in our building will provide extremely valuable and cutting edge information to the community on ear and hearing disorders, treatments and preventative measures. This information will also be available online via the internet. The Hearing Discovery Centre has touch-screen technology that will in time be extended to hospitals and regional medical centres in rural areas.

ESIA's second floor is home to two very special clinics: the Lions Hearing Clinic, Subiaco, and the ESIA Implant Centre which also treats vestibular (balance) disorders. Both services require special expertise in diagnostic and testing work, plus patient rehabilitation and care. The Implant Centre combines the skills of groups of people involved in multi-disciplinary care. Represented are surgeons, audiologists, radiologists and rehabilitation experts. This approach makes ESIA unique in that we individualise our care to meet the specific needs of each and every patient.

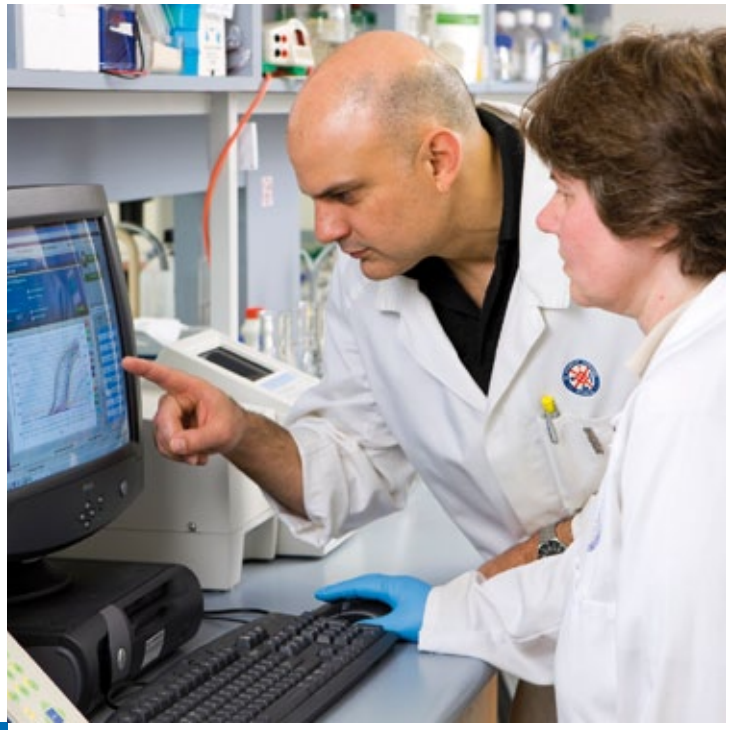
The Commonwealth Government has acknowledged ESIA's work – in particular our pioneering work on multi-disciplinary skills teaching – with a successful $2.7 million grant. This grant allows for the construction and fit-out of a Head and Neck Surgical Skills and Clinical Training Centre within the ESIA building. The development of this state-of-the-art skills training centre is being led by ESIA with the Ear Sciences Centre at UWA, in partnership with St John of God Hospital and Notre Dame University Australia. Together, we will be able to focus on the training of undergraduate and post-graduate medical students, nursing and physiotherapy students, and other medical specialists in ear, hearing, neck and throat disorders. The

director's report

facility will provide specialised instruction across a range of health disciplines to foster teamwork and collaborative learning. This training centre is yet another important part of our original vision of having research, education and clinical activities all in one place.

Of course we should never forget that our mission is to improve and enhance the lives of people with hearing loss through prevention and research. Recent successes have spurred greater momentum and determination toward our vision and, along with rapidly advancing bio-engineering and technology, we are finding more innovative ways to improve the quality of life for those suffering with hearing loss and ear disease.

Just one of ESIA's research success stories is the translation of research findings in ear telehealth into clinical practice. Our ear telehealth system known as 'AurisView' is now available in the Pilbara in Roebourne, South Hedland and Newman. In the Midwest it's based in Meekatharra and also services Cue,



Mt Magnet and surrounding communities. In recent years ESIA's ear telehealth expertise has also been used in Kolkata, India, at the Royal Darwin Hospital and the Menzies School of Health Research, and in outer Perth metropolitan areas. 'AurisView' is currently undergoing an extensive revision that will enable all images and data to be shared by secure internet connections. This will allow faster exchange of information and will improve the quality of clinical care by allowing timely diagnosis and intervention.

At ESIA we take our community hearing awareness responsibilities very seriously and have successfully implemented an interactive, education-based, noise induced hearing loss (NIHL) prevention programme called 'Cheers for Ears'. It focuses on how hearing can be lost through exposure to noise, how hearing loss affects everyday life, and how NIHL can be prevented. 'Cheers for Ears' is delivered directly into the classroom by a health promotion coordinator who facilitates activities and short educational sessions. Preliminary evaluation results have shown an increase in knowledge and behaviour change in the use of personal music players. We have been delivering the programme to state and independent schools in the Perth metropolitan area since May 2010. During this time we have visited over 48 schools and successfully delivered the program to approximately 4,000 students.

From our research laboratories comes the exciting news that our groundbreaking Tissue Engineering Research Project – focused on growing human eardrum skin cells covering a specially formulated scaffold – is about to move a step closer to reality with the commencement of animal trials. I was honoured to be invited to present the 8th Garnett Passe and Rodney Williams Foundation Memorial Lecture at the Royal Society of Medicine in London on May 7, 2010. In this lecture I explained how our innovative and highly-motivated research group has taken an idea and, with persistence and dedication, turned it into reality. Recent recruitment of surgeon scientists from China and Melbourne has reinforced our team. Our new researchers are working on the animal studies and further refinement and augmentation of the bio-scaffold.

Our collaboration with Deakin University continues to strengthen, and we have recently submitted a grant application to the Australian Research Council under its linkage project scheme. The project will investigate how the biomechanical and acoustic

director's report

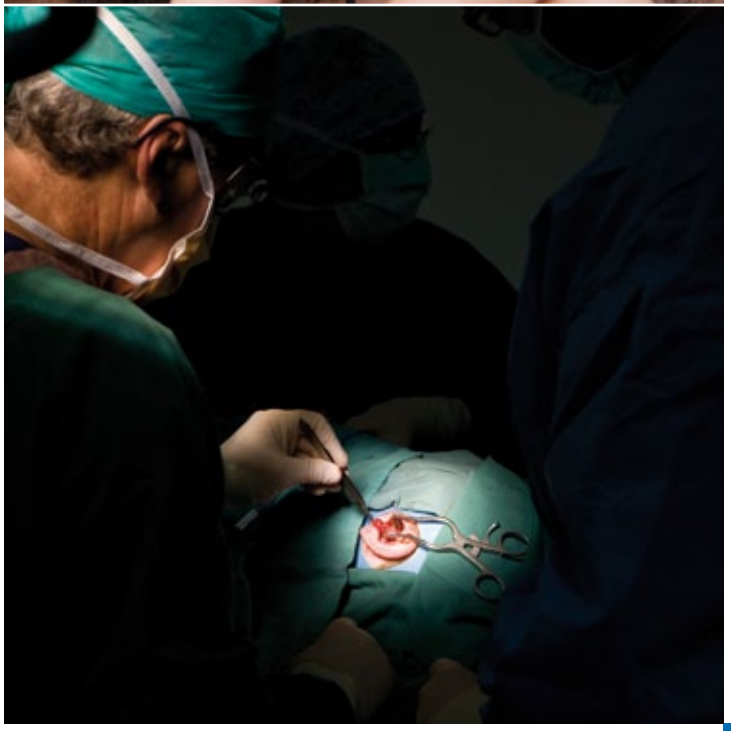
properties of a tympanic membrane (eardrum) change with the structural parameters of the membrane, using biocompatible/ biodegradable silk fibroin as the membrane material.

The end goal of this research is the clinical application of a new generation of bioengineered scaffolds with mechanical, biological and acoustic properties similar to that of the native eardrum. Worldwide, chronic eardrum perforation and associated infection affect more than 330 million people, 60 per cent of whom suffer from significant hearing impairment as a result. It's clear that the potential applications of this innovation are enormous and exciting. The ultimate aim of this project has always been to provide a safe, readily available and relatively inexpensive treatment for ear disease and injury. We are well on our way to achieving that goal. The significant interest that is being shown in this project at an international level is further confirmation that the groundbreaking work being done by our team of research and surgeon scientists at ESIA is truly world-leading.

My thanks are extended to the entire ESIA team for their ongoing support and commitment to our incredible journey to excellence and international recognition. To the trustees, members of the ESIA board, management team and dedicated supporters, may I say a heartfelt 'thank you' for your contribution in time, skill and wisdom. Your support of ESIA through its formative years is sincerely appreciated.

The next five years will see ESIA grow even more in stature and reputation, and in time it will take its place amongst the most prestigious medical institutes in the world. We will achieve this through our strong desire and ability to attract the best people, adopt the most innovative and modern practices in medicine, accept and welcome change and always strive for excellence in all we do.

Furthermore, we will do all this while never forgetting that our work is ultimately for those who suffer ear and hearing disorders, and that we seek to improve their lives immeasurably.



Winthrop Professor Marcus Atlas
Director

philanthropic profile: mr george jones

With a distinguished career spanning more than 35 years in the mining, banking and finance industries in Western Australia, the name George Jones is both a well-recognised and well respected one in the business community.

Less widely recognised, however, are his philanthropic activities. Over the years, Mr Jones has given generously of his valuable time, skills and, through the George Jones Family Foundation, funding to a number of key community projects and organisations – including ESIA.

An ESIA Trustee, Mr Jones is also Chairman of the ESIA Fundraising Committee and took on the role of Chairman of the 'Break the Silence' Capital Fundraising Campaign. In addition to successfully driving fundraising efforts for the $16 million building campaign, he brought the campaign to a close in December 2010 with a $3 million donation through the George Jones Family Foundation.

Officially opened on February 25, 2011, the George Jones Family Centre has given WA a world-class medical research and clinical facility dedicated to hearing loss, balance disorders and ear disease – conditions which affect millions of people throughout Australia and the rest of the world. The completion of the facility in Subiaco has fulfilled the vision of ESIA Director Winthrop Professor Marcus Atlas, who considers Mr Jones pivotal to the success of the fundraising campaign. Mr Jones first became involved with ESIA in 2005, after suffering from a series of collapses. Unhappy with the various diagnoses provided by a number of doctors, he sought a referral to Winthrop Professor Atlas, who quickly diagnosed him with an advanced form of Meniere's Disease, an inner ear disorder affecting hearing and balance. He went on to have surgery, performed by Winthrop Professor Atlas, to alleviate the condition. On his recovery, he contacted Winthrop Professor Atlas to offer his help and support to ESIA, and subsequently took on his Trustee and fundraising roles.

"*George and I met when he was referred to me as a patient some years ago now, and the way he tackled the terrible problems of Meniere's disease was indicative of the way he handles much in his life,*" said Winthrop Professor Atlas. *"What impressed me most was his single-minded determination – quiet, well prepared, carefully researched and then completely decisive. I find those qualities incredibly motivating and I have gained much from his advice and friendship. In unison with his business success he gives back to the community very generously. As the major benefactor to ESIA and Chairman of the highly successful Fundraising Committee, his name and that of his wonderful family will be proudly displayed on our spectacular, new state-of-the-art facility in Subiaco."*

ESIA is not the only not-for-profit organisation to benefit from Mr Jones's generosity. After being taken into care at the age of six, he lived at the Parkerville Children's Home until the age of 16 and today he maintains strong links to Parkerville Children and Youth Care, the not-for-profit organisation that operates the Home. Mr Jones has held a seat on the Board of Parkerville Children and Youth Care for the past 14 years, and serves as Chairman of the

philanthropic profile: mr george jones

Finance and Fundraising Committees. Under his leadership, the organisation has been able to extend and develop the range of care and services it offers to disadvantaged children. Key among them are Penny House, named after Mr Jones's wife, a supported residential facility for teenage mothers, and Australia's first Child Advocacy Centre. The $4 million centre, to be opened this year in Armadale, provides a holistic approach to the care and treatment of young abuse victims in a child-friendly, warm environment. Both projects were beneficiaries of significant financial contributions from Mr Jones and his family, in addition to his fundraising efforts.

As Mr Jones explains it, his commitment to philanthropic causes reflects a strong belief that those fortunate enough to be financially well-off have a responsibility to give back. *"In the US the people with wealth there give generally about 14 per cent of their assets to charity; in Australia it's about 4 per cent,"* he said.

"When you get to a certain level of wealth – and I'm not extremely wealthy – I do think it's a part of everyone's responsibility to give back. When people get to these senior positions it's not only the money they can give, it's the expertise and knowledge and how to get things done, and different skill sets they can bring to the table to achieve great things for a good cause."

Mr Jones's family – wife Penny and their four daughters – are also involved in philanthropic activities through the family foundation. *"I've got my family involved in it, so they endorse that philanthropic spirit already, and when I'm gone I know it will continue,"* he said.

With ESIA now in its new Subiaco home, and the George Jones Family Centre officially open, George said he was delighted with the outcome of the project. *"The environment and the facilities there are absolutely world class, and we are already attracting world class people,"* he said.

"We've now got the physical aspects in place and in Marcus and the team that's there, the spirit of the place is extraordinary and there is no doubt we'll do great things. I can't do what people like Marcus can do, but if I can help in some small way with my time or with financial support then it's worthwhile."

Officially opened on February 25, 2011, the George Jones Family Centre has given WA a world-class medical research and clinical facility dedicated to hearing loss, balance disorders and ear disease – conditions which affect millions of people throughout Australia and the rest of the world.

vale val. farewell to a gifted scientist

Val Alder/Johnstone 1942 – 2010

In 2010 ESIA sadly bid farewell to a highly respected, longstanding supporter of our work, and former Chairman of the Board.

Professor Val Alder/Johnstone was a gifted scientist who established a laboratory in Perth that made significant discoveries towards understanding some of the most common diseases that can cause blindness. Her measurements of the metabolism of oxygen in the retina gave science a deeper understanding. Over her research career, Professor Alder/Johnstone published more than 100 papers and leaves a volume of work about retinal physiology and the impact of eye disease.

From 1978 to 1998, she led the Medical Research Group into Physiological Causes of Diabetic Retinal Disease; her findings are still referred to in scientific journals, and her work was recognised by international research agencies, including the Juvenile Diabetes Research Foundation.

Professor Alder/Johnstone was an Emeritus Professor at Murdoch University from 2005, Pro Vice-Chancellor (Research) at Murdoch (1999-2003) and Deputy Director of the Lions Eye Institute in Perth (1996 to 1999). Between 1971 and 1998, she lectured in physiology, physics and mathematics at The University of Western Australia (UWA). She sat on numerous committees and in the mid-1980s was granted a fellowship by the National Health and Medical Research Council of Australia and went on to become one of the most senior fellows in WA.

A wartime baby born in Hampshire, as a young girl Professor Alder/Johnstone was a voracious reader who developed an interest in science. At 18 she studied physics at the Imperial College, London, meeting her first husband Mike Alder. In 1970, they migrated to Perth with their two children when Mike accepted a job in mathematics at UWA. Professor Alder/Johnstone later obtained a doctorate from UWA.

Her inclination for hard work, her enthusiasm for life and her wide range of interests (including playing Beethoven sonatas and travelling) meant she pushed herself to the limits of physical capability. True to form, Professor Alder/Johnstone was annoyed by suggestions of affirmative action for women; each of her appointments was earned through hard work.

Professor Alder/Johnstone passed away in Perth on August 20, 2010. She is survived by children from her first marriage, Ceri Wood and Bart Alder, and she leaves her husband Ray Johnstone, whom she married in 1984, and their two children, Elizabeth Johnstone and Victoria Prowse.

"...a gifted scientist who established a laboratory in Perth that made significant discoveries towards understanding some of the most common diseases that can cause blindness."

building report:
a new home for the ear science institute australia

ESIA now proudly calls 1 Salvado Road, Subiaco, home. In January 2010 leading specialists, scientists, researchers, clinicians, technologists, academic faculty and students moved in together under one roof, in the heart of a developing medical precinct in Subiaco. In our original vision back in 2006, we identified the need for a purpose-built facility to accommodate medical research, administration, medical practitioner clinics, a surgical skills training laboratory and a private hospital. The collaboration of scientists, architects, neighbours, donors and sponsors transformed this vision into a reality.

The project meant working with existing heritage-listed buildings on a triangular site with height restrictions, and the building needed to provide a distinctive and memorable entry into the Subiaco Centro precinct in accordance with the objectives of the Subiaco Redevelopment Authority and the Subiaco City Council. Our neighbours' needs also had to be met with the stipulation that existing buildings on the site that housed St Joseph's Catholic Church, Subiaco administration offices and meeting rooms were to be replaced at the rear of the heritage-listed presbytery. To accommodate these requirements, it was necessary to extend the car park located in the basement under the presbytery and to create direct access from the car park into the presbytery for parishioners.

The finished building is a testimony to the skill and experience of the award-winning Peter Hunt Architects Group and to the builder, BGC Construction. In synergy with nearby medical facilities, including the St John of God Hospital, our new home displays contemporary aesthetics including a sweeping tinted glass wall facing Salvado Road, which accentuates and complements the neighbouring buildings and St Joseph's Church.

Our new building is fully occupied and the tenants include the Subiaco Private Hospital, Cochlear Ltd, Med-El, Winthrop Professor Marcus Atlas, the Lotterywest-funded Hearing Discovery Centre and the Perth ENT Centre. The second floor accommodates the ESIA Implant Centre, Lions Hearing Clinic, Subiaco, and head office for the Ear Science Institute Australia. Our vision for the future continues to unfold with construction in progress on the Centre for Ear Nose and Throat Education and Research (CENTER, see page 22) on the ground floor.

We will be forever grateful to the many valued individual donors, foundations, companies and organisations which have turned our vision into a reality.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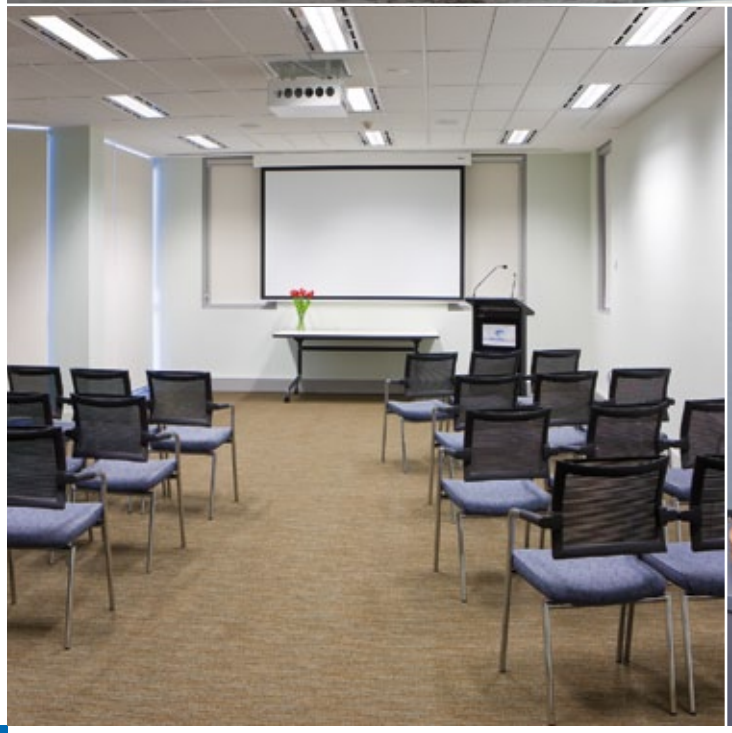
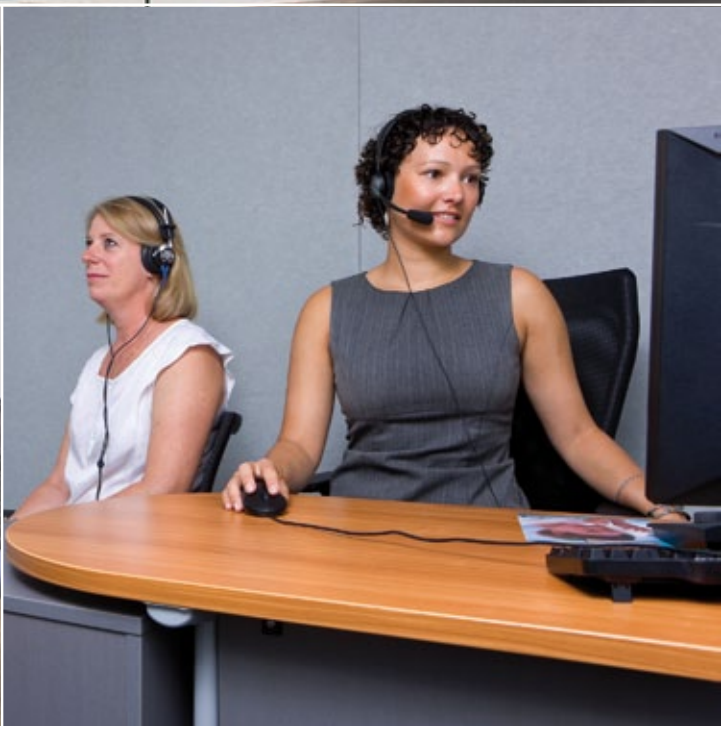
ear science institute australia






ear science institute australia
Lions
HEARING CLINIC
SUBIACO
PRIVATE
HOSPITAL
1 Salvado Road, Subiaco

the hearing discovery centre

lotterywest supported

With the growing prevalence of hearing loss in our communities, and the increasing incidence of ear, hearing and balance disorders, an accessible resource that can offer hands-on and remotely accessable education, awareness and practical help is of inestimable value.

Funded by Lotterywest, ESIA's new Hearing Discovery Centre is a unique facility that is specially designed to communicate a wide range of information in an interactive manner. Target groups include the general community, school groups, people with ear and hearing disorders, health professionals and researchers.

Located within the ESIA building in Subiaco, the Hearing Discovery Centre aims to provide information, advice and support to members of the community who suffer from any form of hearing loss, balance disorder or ear disease. It is also designed to assist and educate those who care for sufferers, and those who wish to learn more about protecting hearing and preventing hearing loss.

Visitors will be able to discover, in an interactive setting, a great deal of up to date information about ear, balance and hearing disorders. They can learn about testing and assessments, hearing loss prevention strategies and the latest treatment options.

In addition, visitors to the Hearing Discovery Centre will find a state-of-the-art, self-administered preliminary audiological testing system that can:

- detect a level of hearing impairment;
- provide data; and
- encourage users to seek the advice of a specialist health professional.

What's more, all information in the Hearing Discovery Centre will be accessible via the internet, and links will be established with organisations that provide services in ear disorders and hearing loss support.

The Hearing Discovery Centre is therefore a true community resource, and reflects both Lotterywest's and ESIA's commitment to projects and services that offer the widest possible reach and benefit to all communities. Associated hearing and ear disorder support groups (including those for tinnitus and Meniere's disease) will have access to the centre and will be encouraged to participate in the centre's activities.

The new Hearing Discovery Centre is destined to play a significant role in both the awareness and prevention of ear and hearing disorders in our community, and the enhancement of quality of life through the promotion of hearing health.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CONCLUSIONS
Background
Materials and Methods

centre for ear nose and throat education and research (CENTER)

Perth, Western Australia, is set to become a regional leader in specialist medical training with the establishment of a unique state-of-the-art skills development centre at the ESIA facility in Subiaco.

ESIA, with the Ear Sciences Centre at UWA, in partnership with St John of God Hospital and the University of Notre Dame Australia, aims to establish a world-leading medical and surgical training facility specialising in medical procedures and diseases of the head and neck. The facility is to be known as the Centre for Ear Nose and Throat Education and Research (CENTER).

ESIA will draw on its, and its partners' extensive global network to contribute to and assist in creating the CENTER as a leading educational hub. The location in the new Subiaco facility, adjacent to St John of God Hospital, is central to the emerging health precinct being created in the immediate area. The CENTER will be within a 7km radius of the current major health facilities in Perth.

The CENTER will specialise in disorders of the head and neck – including disorders of the ear, nose and throat – and will provide skills-based, multidisciplinary training for groups including surgeons, nurses, audiologists, speech pathologists and physiotherapists.

The increase in Western Australian student and trainee numbers, involving many health disciplines, has created a strain on existing public hospital clinical teaching and training placements that utilise traditional apprentice small-group teaching led by clinical experts. High quality clinical training, for the further projected increase in numbers, requires more innovative, multidisciplinary and interdisciplinary techniques of skill acquisition with a focus on common health disorders.

Disorders of the head and neck and the ear, nose and throat (ENT) are extremely common in the community. For example, community-based studies reveal over 21% of the Australian adult population suffer from hearing loss, and greater than 70% of Australians 71 years and over have hearing loss[1]. Over one-quarter have nasal disorders.

Paediatric ENT diseases represent one of the most common disorders of childhood with acute otitis media (AOM) affecting Australian children. Tonsillectomy and insertion of tympanostomy tubes are two of the most frequently performed paediatric surgical procedures[2].

In spite of this significant prevalence, there is a lack of availability of dedicated training opportunities for professionals in head and neck disorders (including ENT) across the disciplines, half of whom enter community-based careers[3]. These problems are often managed by separate health disciplines; however, clinical and cost benefits would be obtained by greater access to appropriately trained multidisciplinary health care teams.

The CENTER capitalises on the restructuring of the medical training processes, especially in catering for the increasing numbers of medical, nursing and allied health students. Surgical and medical skills training is moving rapidly away from training at the hospital bedside towards training on simulators and within dedicated training facilities. As an example, in the UK and the USA many hospitals associated with medical schools are now requiring medical students to learn skills in a simulated environment before any patient interaction.

Professor Michael Quinlan, Winthrop Professor Marcus Atlas and The Honourable Mark Butler MP at the official funding announcement held within the Len Buckeridge Boardroom at the ESIA on July 20, 2010.

The importance of the CENTER has been recognised with a significant funding commitment by the Federal Government through the Department of Health and Ageing's Innovative Clinical Teaching and Training Grants programme. The grant, announced by the Parliamentary Secretary for Health, The Honourable Mark Butler MP, provides $2.745 million over four years for the construction and fit-out of the CENTER within ESIA's new building.

The CENTER will offer:

- hands-on and interactive medical, surgical and paramedical education and training in disorders and disease of the head and neck, using the CENTER's facilities and simulated environments;
- the opportunity for medical and surgical trainees to undertake skills training courses in disorders and disease of the head and neck as part of their initial training; and
- sophisticated continuing surgical and medical education and skills revalidation, using the state-of-the-art facilities, for practicing health professionals who need to learn new skills or who require ongoing training to maintain their professional standards.

The CENTER will establish itself as a world-class education, training and research facility proudly supported by key partners, industry and the medical fraternity.

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"The CENTER will confirm Western Australia's standing as an international centre of excellence in ENT treatment, education and training. WA has a well-deserved reputation for providing quality medical education, and we see this facility forming an integral part of that in the future."

Mr Graeme Jolley – Chairman, ESIA

The Honourable Mark Butler MP at the official funding announcement.

"The focus will be on providing specialised instruction across a range of health disciplines, in a way that will foster teamwork and collaborative learning."

Winthrop Professor Marcus Atlas – Director, ESIA

dom salvado statue:
a figure of inspiration and determination

Today, at 1 Salvado Road, Subiaco, the inspirational and dedicated man who has been honoured by having the road named after him, Dom Salvado, can once again be 'seen' striding forth, determined to fulfil his mission for the greater good of humanity.

Dom Rosendo Salvado arrived in this new colony in 1846 and his insightful and compassionate work changed lives and made history. It's therefore fitting that a statue of him has been specially created and erected adjacent to the ESIA building.

This striking community art contribution pays homage to Dom Salvado, who was a Benedictine monk, missionary, author and pioneer of the Subiaco region. Upon his arrival, Dom Salvado began his work with the local Aboriginal community and with prisoners at Fremantle.

In March 1846 he established a mission 161 kilometres north of Perth at Victoria Plains for the training of Aboriginal people. This settlement was later named New Norcia after Norcia in Italy, the birthplace of Saint Benedict.

Dom Salvado was a remarkable and intuitive character who recognised the value of the Aboriginal culture and its peoples' affinity with the land. His recording of the local language, customs and flora and fauna is valued by historians and scholars.

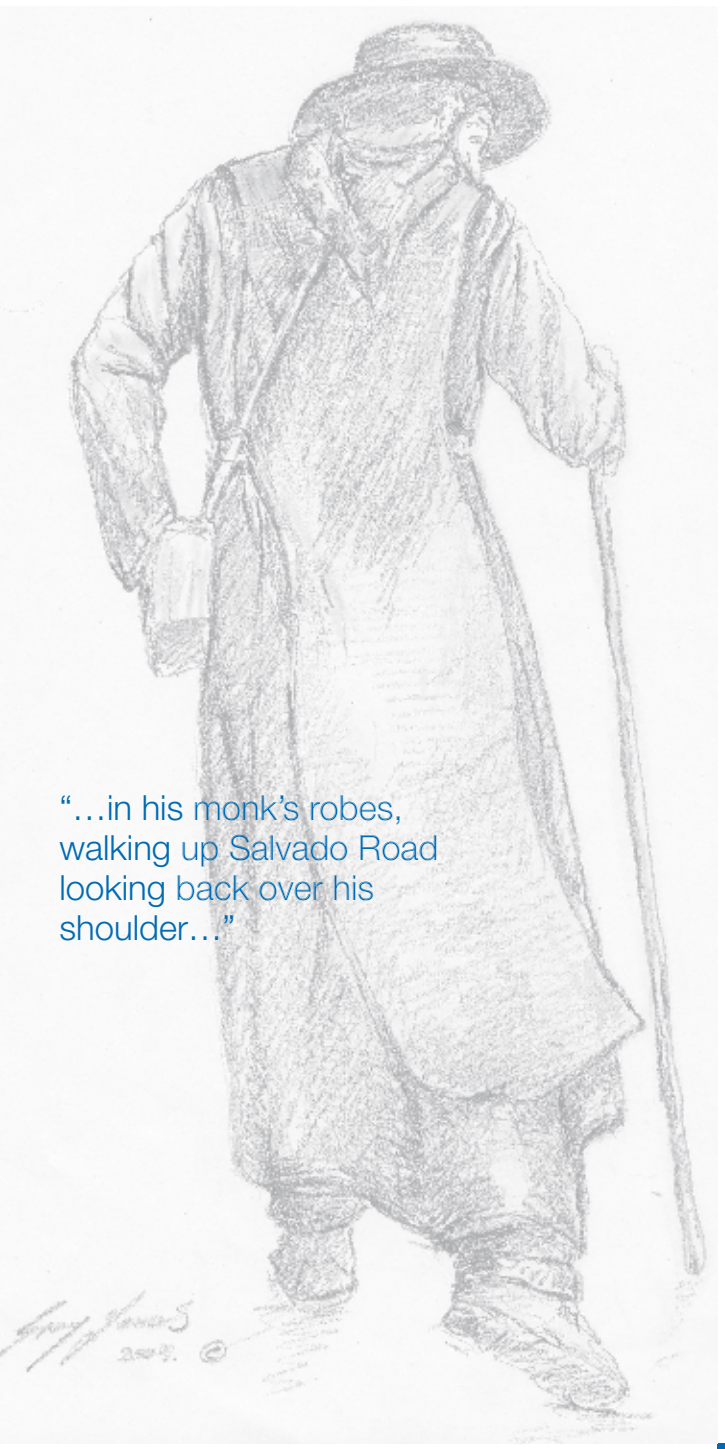
He was a man of incredible physical endurance and talent, and he was known to have driven a bullock dray from New Norcia to Perth where – as a concert pianist – he performed in Murray Street to an audience of 70 people who each paid $1. This was Dom Salvado's way to raise funds for the mission. It was also reported that due to the hardships experienced in flood conditions on his journey, he arrived in dungarees and without the soles of his shoes, to be greeted by the local dignitaries of Perth.

Dom Salvado died in Rome on December 29, 1900. His remains were brought to Western Australia in June 1903 and reburied in the New Norcia church, in a region that was close to his heart.

The statue on Salvado Road was thoughtfully created by local Fremantle sculptor Mr Greg James. He has depicted Dom Salvado in his monk's robes, walking up Salvado Road, looking back over his shoulder as he leaves Subiaco behind to take his flock to New Norcia where they may be less influenced by the temptations of the local culture of the time.

As an institution with a clear vision for the future, ESIA is heartened that it is able to recognise and celebrate the fierce determination Dom Salvado demonstrated in his mission to make a lasting, positive and meaningful contribution to the people and the society of his time.

Below: Unveiling of the Dom Salvado Statute December 9, 2010. Left-right: Mr Graeme Jolley, Winthrop Professor Marcus Atlas, Rt Rev Bernard Rooney, Mr Greg James, Rev Fr Joseph Walsh.



"…in his monk's robes, walking up Salvado Road looking back over his shoulder…"

Dom Rosendo Salvado (1814-1900). Sculptor: Greg James

research report

Research at ESIA is facilitated by the close working relationship between clinicians and researchers. The clinical leadership is provided by Winthrop Professor Marcus Atlas and Professor Peter Friedland and the research group leadership by Adjunct Professor Robert Eikelboom and Dr Robert Marano.

The research team has a strong emphasis on improving patient outcomes and a commitment to teaching and training. The research groups are multi-disciplinary in nature, drawing skills from many fields such as engineering, computer science, molecular and cellular sciences, otolaryngology and audiology.

The work is carried out in close collaboration with other research institutions, universities, hospitals, government agencies, industry and patients.

Research Focus

ESIA has gained a reputation as a leader in research and technology in to the many debilitating diseases that affect hearing. Our commitment to the cause has been recognised internationally as our researchers continue to focus on these major research areas:

- Molecular and Cellular Otolaryngology
- Computer and Information Science
- Clinical Otolaryngology

Molecular and Cellular Otolaryngology

Summary of Activities

During 2009 and 2010 our main research project has continued with dedicated focus. This project is the development of an autologous engineered tympanic membrane (eardrum) for use as a graft in chronic perforations.

Two students, Dr Peter Santa Maria and Dr Brett Levin, are nearing completion of their respective projects while two new students, Dr Bing Teh and Dr Shen Yi, are taking up where the first two left off. The new students are currently investigating the prospect of adding growth factors to the silk fibroin formulation, with a view to enhancing cell growth over the scaffold. In addition they are investigating the local otological biocompatibility of the silk scaffold in an animal model.

This groundbreaking work will be the final chapter prior to pre-clinical animal trials for the safe evaluation of this product for human clinical trials. In parallel with these studies, we are working closely with our collaborative partners at Deakin University and the CSIRO to further optimise the silk formulation which will enhance and improve surgical outcomes.

In our inner ear studies, several genes have been identified as having a possible influence on the development of presbycusis (progressive, age-related hearing loss). These genes are being further investigated in collaboration with the Walter and Eliza Hall Institute of Medical Research's Dr Rachel Burt.

Another exciting achievement is our successful culture of cells from the human utricle (within the inner ear), which possess hair cell-like characteristics – a first for any laboratory. This will enable us to investigate processes such as cell cycle and differentiation in an *in-vitro* model.

research report

Current Projects

Autologous Engineering of a Human Tympanic Membrane (TM)

1. Gene expression in a rat TM during a wound healing response.
2. Characteristics and optimisation of cell growth on various silk fibroin formulations.
3. Effect of various growth factor combinations on the migration and proliferation of cultured TM keratinocytes on silk.
4. Localised otological biocompatibility of silk fibroin in a rat model.
5. Characterisation of a possible immortalised cell line from a human TM.

Inner Ear

1. Changes in gene expression during the aging process in a mouse model.
2. Changes in gene expression following noise induced hearing loss in a mouse model.
3. Characterisation of cells cultured from the human utricle with a view to investigate cell cycle and differentiation processes.

Research Team

Dr Robert Marano, BSc, PhD (Acting Head of Group)
Winthrop Professor Marcus Atlas, MB BS, FRACS
Ms Sharon Redmond (Senior Research Assistant)
Dr Peter Santa Maria MB BS, PhD Candidate, Surgeon Scientist Programme 2007-2010
Dr Brett Levin MB BS, Masters of Medical Science Candidate, Surgeon Scientist Programme 2008-2010
Dr Shen Yi MB BS, Masters of Medical Science Candidate, Surgeon Scientist Programme 2010-2011
Dr Bing Teh MB BS, PhD Candidate, Surgeon Scientist Programme 2010-2013

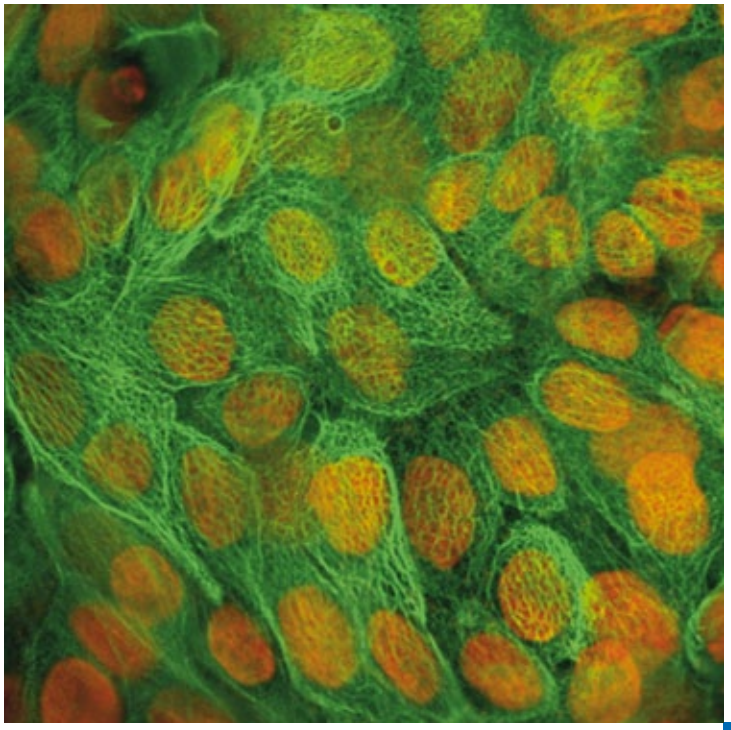
Awards and Honours

Atlas, M. 8th Garnett Passe and Rodney Williams Memorial Foundation Lecture at the Royal Society of Medicine, May 2010.

Teh, B. Best student poster, School of Surgery UWA Research Symposium, December 2010.

Collaborations

Winthrop Professor Ming Hao Zheng, Centre for Orthopaedic Research, School of Surgery, UWA, Perth WA.
Alfred Deakin Professor Xungai Wang, Centre for Material and Fibre Innovation, Institute for Technology Research and Innovation, Deakin University, Geelong Vic.
Dr Rangam Rajkhowa, Centre for Material and Fibre Innovation, Institute for Technology Research and Innovation, Deakin University, Geelong Vic.
Associate Professor Jagat Kanwar, Laboratory of Immunology & Molecular Biomedical Research, Institute of Biotechnology (BioDeakin), Geelong Vic.
Dr Jerome Werkmeister, CSIRO Molecular and Health Technologies, Australia.
Dr Chris Elvin, CSIRO Livestock Industries, Australia.
Dr Rachel Burt, Walter and Eliza Hall Institute of Medical Research, Melbourne Vic.



surgeon scientists:
creating a culture of scientific discovery

The Garnett Passe and Rodney Williams Memorial Foundation surgeon scientists programme provides the opportunity for surgical trainees to undertake research and obtain a higher university degree prior to the completion of their advanced training in otolaryngology. These surgeon scientists participate in basic research projects in units with other scientists, creating a culture of scientific discovery that can be applied to the clinical environment.

Dr Peter Santa Maria is a 32-year-old who represents this new breed of surgeon scientists - intelligent, highly motivated and energetic. He is one of a small group of Australian ENT surgeons who are willing to make big sacrifices in order to further the scientific evidence base.

Born and trained in Western Australia, Dr Santa Maria is studying with ESIA and the Ear Sciences Centre at UWA. Having recently submitted his doctoral (PhD) thesis, he notes that ESIA has been *"very supportive of my research from the beginning. The ESIA lab staff and general support have been invaluable to me in completing my PhD, and I can't thank them enough."*

Dr Santa Maria is now in his first year of advanced otolaryngology surgical training. This is part of what is referred to as the surgeon scientist pathway, one that aims to produce otolaryngologists who link basic research science to clinical medicine. Dr Santa Maria's area of research is investigating the molecular genetics of a healing perforated eardrum. This knowledge is important as ESIA continues its groundbreaking work on the development of an artificial eardrum.

The future for Dr Santa Maria is exciting, especially for what it promises Western Australia. He is hoping to finish his ENT training in 2011 before heading to the USA for a few years of fellowship training. *"I'd definitely like to have a practice with a research component, and I'm hoping I can bring something new back to Perth."*

Dr Santa Maria firmly believes ear surgery and surgical techniques in Perth are at an international level. *"I think Perth is at the cutting edge of ENT surgery and the standards here are comparable to anywhere around the world. As a specialty, ENT has been heavily influenced by advances in technology, and with better computers, optics and materials the specialty is making leaps and bounds."*

As a surgeon scientist sure to make his mark, Dr Santa Maria reflects on where ear surgery may be taking us in the future. *"There will be more opportunities for minimally invasive surgery, robotics and virtual reality, especially in the area of training surgeons."*

Dr Santa Maria is in the surgeon scientist pathway through a scholarship funded by the Garnett Passe and Rodney Williams Memorial Foundation.

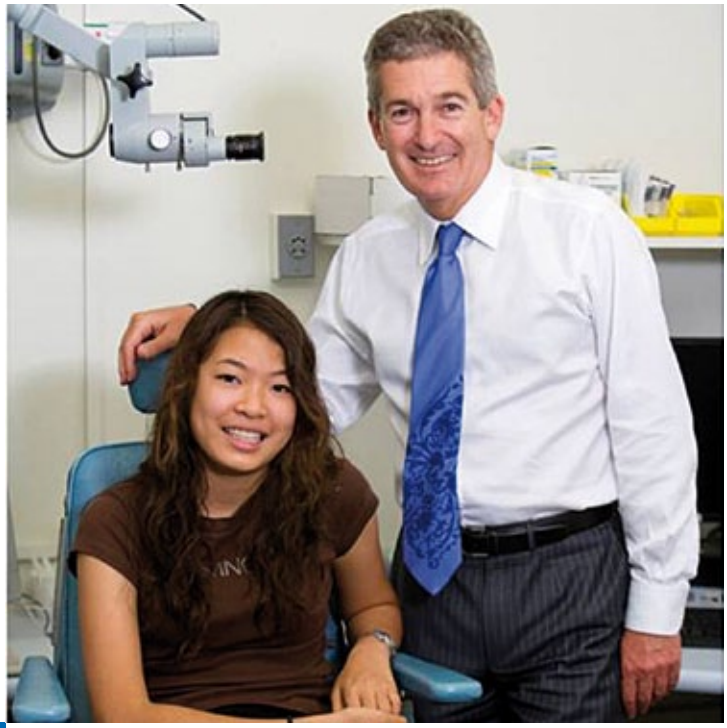
Dr Peter Santa Maria, Surgeon Scientist.

ESIA project produces a BioGENEius

For most high school students, summer holidays are a time to head to the beach and hang out with friends. But for Perth College student Miss Jasmine Choi, the holidays were all about lab coats, microscopes and petri dishes.

The Year 11 student spent her summer break working in the ESIA laboratory under the guidance of Dr Rob Marano. She completed this as part of the sanofi-aventis BioGENEius Challenge, which gives top high school students the opportunity to work alongside one of Western Australia's world-class biotechnology scientists to complete their own research project.

Winthrop Professor Marcus Atlas and Miss Jasmine Choi



The Challenge is open to students in years 8 through to 12 who are enrolled in any biology or science-related units at a WA public or private school. From ten finalists, two WA winners are selected to travel to the USA to compete against finalists from the USA and Canada.

"Jasmine's project looked at the effect that using different growth factors had on cell proliferation and migration. She undertook most of the lab work and analysis on that," said Dr Marano. *"She was very keen, and she worked hard on the project. Ultimately she wasn't one of the two winners from Western Australia, but she was one of the top ten finalists, which was a great achievement."* Miss Choi's project marked the first time ESIA has been involved in the BioGENEius Challenge and it most likely won't be the last.

"It was a great experience for us as well as Jasmine. The results were quite good and it's certainly given us some encouragement in that area and pushed us to keep moving down that path," said Dr Marano.

beating the drum:
a new bioengineered tympanic membrane

On May 7, 2010, ESIA Director and prominent Perth Surgeon, Winthrop Professor Marcus Atlas delivered the prestigious Garnett Passe and Rodney Williams Foundation Memorial Lecture at the Royal Society of Medicine in London, providing an update to the international medical community on the groundbreaking research being conducted by ESIA.

The presentation detailed the evolution of a bioengineered human tympanic membrane using modern cell biology and genetic techniques. In 1640 Marcus Banzer reconstructed the tympanic membrane using pigs' bladders, and since then there has been a constant evolution of tympanic membrane reconstruction; however, the outcomes are still unpredictable and the reconstructed eardrum is still limited biomechanically, is not transparent and requires costly surgery.

Surgeons and basic scientists in the Molecular and Cellular Otolaryngology Group at ESIA have studied the histology and cell biology of the normal human tympanic membrane. The histological and molecular genetic changes following tympanic membrane perforation have been determined for the first time, and reveal differences when compared to normal cutaneous healing. This understanding has allowed the development of human keratinocyte tympanic membrane cell cultures and a highly innovative silk-derived biomembrane that replicates the human eardrum. With the use of genetic technology these scientists have created a biomembrane that encourages keratinocyte and wound healing. Now studies of biocompatibility and human clinical trials will pave the way for a new treatment of tympanic membrane perforation and different ways to manage chronic otitis media.

Chronic eardrum perforations and associated infections affect in excess of 330 million people worldwide, 60 per cent of whom suffer from a significant hearing impairment as a result, so the potential applications of this innovation are enormous. In 2008, more than 650,000 Australians had otitis media at an overall estimated cost to the health system of somewhere between $85 million and $163 million. Providing safe, available and relatively inexpensive treatment for ear disease and injury is the ultimate aim.

ESIA, in collaboration with Deakin University, has achieved a world first by being able to successfully grow human eardrum skin cells on a specially formulated scaffold. Animal trials looking at biocompatibility and immune response are underway.

Winthrop Professor Atlas said, *"If following that all goes well with human trials and we get the results we anticipate, we could be looking at a treatment that is commercially available within five years."*

The ESIA process uses the patient's own skin cells and the scaffold to replicate the human tympanic membrane, ensuring the engineered eardrum has the right vibro-mechanical properties to function well. This process opens up the possibility of a quicker and less invasive treatment for perforated eardrums, repairing under local anaesthetic as a day case, instead of the current two procedures under general anaesthetic producing mixed results.

ESIA is breaking new ground. Through innovation, world-class research and stony determination, we are turning dreams into reality. The goal of 'Beating the Drum: A New Bioengineered Tympanic Membrane' is evidence of the ground-breaking work being done in Western Australia.

research report

Clinical Otolaryngology

Summary of Activities

Clinical research at ESIA draws its strength from the close working relationship between clinicians and researchers. It has a strong emphasis on improving patient outcomes and a committed focus to teaching and training. As a tertiary referral centre, ESIA undertakes clinical trials of innovative surgical procedures and devices, treatment of ear disease and hearing disorders and testing of associated products. The research group's vision encompasses the aim to improve the knowledge of ear diseases, to develop best-practice knowledge in treatment and rehabilitation, and to translate this knowledge into clinical practice.

Giving hearing to those who have never heard, or returning hearing to those who have lost it, is now possible with a range of implantable devices including cochlear implants and middle ear implants. These can greatly enhance the patient's quality of life. ESIA's clinical researchers are involved in the advancement of these devices and the development of rehabilitation techniques that must accompany these implants following surgery. The research groups are part of worldwide research programmes, and ESIA's fellowship programmes attract clinicians and researchers from around the world. The focus is on medical devices and prostheses, middle ear mechanics and quality of life for patients with chronic ear disease, Meniere's Disease, semi-circular canal dehiscence, cochlear implants, and acoustic neuroma.

Current Projects

Our current research projects include:

1. Evaluation of tinnitus treatments and management pathways;
2. Evaluating outcomes after middle ear and cochlear implant surgery;
3. Validating automated audiology;
4. Telephone use following cochlear implantation;
5. Evaluation of video-otoscopes for telehealth;
6. Development and validation of protocols for head and neck cancer telehealth;
7. Sudden hearing loss;
8. Semi-circular canal dehiscence syndrome;
9. Validation of protocols for vestibular testing of patients;
10. Clinical decision support systems;
11. Evaluation of hearing aid use;
12. Head and neck cancer survival;
13. Middle ear packing materials;
14. Epidemiology of hearing loss, tinnitus and dizziness;
15. Environmental and genetic determinants of hearing loss;
16. Anatomy of the middle and inner ear; and
17. Evaluation of hearing loss prevention programmes.

Research Team

Winthrop Professor Marcus Atlas, MB BS, FRACS (Head of Group)
Professor Peter Friedland, MB B Ch, M Med, FCS(SA), FRACS (Co-Head of Group)
Adjunct Professor Robert Eikelboom, B Eng, M Appl Sc, PhD
Assistant Professor Michael Gluth, MD
Dr Barrie Tan, MB BS, MR CS
Dr Michael Lim, MB BS
Dr Timothy Marr, MB BS
Dr Jonathan Chiew, MB BS
Dr Bing Teh, MB BS
Mr Lu Png, MB BS
Ms Cathy Sucher, BSc, Dip Aud, MAud, MAud SA(CCP)
Ms Ronel Chester-Browne, B Log (SpPath&Aud)
Ms Vesna Maric, B.Sc.(Hons), M Clin Aud, MAud SA(CCP)
Ms Nicola Linton, B Sc (Hons), M Clin Aud, MAud SA(CCP)
Ms Natalie Leishman, BSc
Ms Natalie Carmody, BA(Hons)
Ms Jordan Bishop, Bachelor of Science student

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Ms Katrise Eager, BSp Path, Dip Aud, MAud SA(CCP)
Ms Elle Statham, BSc, M Clin Aud, MAud SA(CCP)
Ms Gemma Upson, BSc, M Clin Aud, MAud SA(CCP)
Ms Rebecca Bennett, BSc(Hons), M Aud, MAud SA(CCP), MBus
Ms Jacqui Pollock, BSc, BA, Dip Aud Sc, M Clin Aud, MAud SA(CCP)
Ms Gemma Ivey, BSc, Dip Aud, MAud SA(CCP)

Awards and Honours

Friedland, P. Dean's Excellence in Teaching Award 2010, University of Notre Dame Australia.

Collaborations

The HEARing Cooperative Research Centre (CRC), Melbourne Vic.
Mr Yuen Heng-Wai, Changi General Hospital, Singapore.
Comprehensive Hearing Implant Centres (HEARRING), www.hearring.com
Professor Donald Robertson, The Auditory Laboratory, UWA, Perth WA.
Professor Geoff Hammond, Faculty of Life & Physical Sciences, UWA, Perth WA.
Dr Toni Musiello, School of Surgery, UWA, Perth WA.
Busselton Population Medical Research Foundation, Perth WA.
School of Population Health, UWA, Perth WA.
Dr Michael Hunter, Busselton Healthy Ageing Study, Busselton WA.
Clinical Associate Professor Andrew Whyte, School of Surgery, UWA, Perth WA.
Ms Dayse Tavora, Medical Audiology, Perth WA.
Ms Roberta Marino, Specialist Hearing Services, Perth WA.
Otolaryngology Department, Sir Charles Gairdner Hospital, Perth WA.
WA Cancer Network, Department of Health, Perth WA.
St John of God Hospital, Subiaco, Perth WA.
Notre Dame University Australia, Fremantle, Perth WA.
PathWest, Laboratory Medicine, Perth WA.

profile: professor peter friedland

Professor Peter Friedland joined ESIA at the beginning of 2009 after relocating to Perth from South Africa. While living in South Africa he was Professor and Clinical Head of the ENT Department of the Donald Gordon Medical Centre at the University of Witwatersrand and introduced several innovative surgical procedures into Africa. Professor Friedland is not only passionate about but also dedicated to teaching, academic research and community service. In this role as Professor and Clinical Head he was not only the personal ENT surgeon to President Nelson Mandela for nine years, but also developed and coordinated several not-for-profit charity outreach programmes for underprivileged children in the urban and rural areas in southern Africa.

Professor Friedland was appointed as Professor in the School of Surgery at UWA, Consultant ENT Surgeon at Sir Charles Gairdner Hospital and Head of Training and Education and Co-Head of Clinical Research at ESIA in August 2009. He has been actively involved in teaching and developing training programmes for undergraduate medical students at UWA and Notre Dame University, Australia. Professor Friedland's involvement extends to postgraduate teaching and supervision of researchers and ENT surgical trainees. He has recently been awarded a prestigious teaching excellence award by Notre Dame University, Australia and has also been nominated for a similar award at Sir Charles Gairdner Hospital.

In December 2009 Professor Friedland and Winthrop Professor Marcus Atlas convened the 1st Master Course in round window cochlear implantation in the southern hemisphere, which was attended by senior expert otologists from Australia, Asia and Europe. Another oversubscribed 'first' coblation techniques course was held in May 2010 and the 2nd Master Course is scheduled for February 25-26, 2011.

In Professor Friedland's own words, *"Working at the ESIA and the University of Western Australia has been the highlight of my career. My years spent gaining experiences in very different scenarios in Africa have helped prepare me for the wonderful opportunities here. The ESIA provides me with the opportunity to participate in the remarkable integration of teaching, training, exciting cutting-edge research, leading experts and world-class facilities."*

"The ESIA provides me with the opportunity to participate in the remarkable integration of teaching, training, exciting cutting-edge research, leading experts and world-class facilities."

lions hearing clinic report

The Lions Hearing Clinic's (LHC) five permanent hearing centres and three visiting sites, located across metropolitan Perth, deliver a wide range of audiological services and rehabilitation options for hearing loss, including fitting of hearing aids, referral to specialists and investigations of ear disorders. We have consistently focused on building on the strengths of audiological research to improve hearing health care for our patients. We strive to discover new techniques for diagnosis of hearing-related illness and to develop new therapies for evidence-based aural rehabilitation in order to meet the needs of the community.

Our People

Our current staff complement, employed on both a part-time and full-time basis across our network of hearing centres, consists of 25 employees, 18 of whom are audiologists and nine administration staff members. This represents a 40 per cent increase in the number of clinical staff (audiologists) from the preceding year.

Given the industry-wide shortage of audiologists, LHC is in the process of developing programmes aimed at strengthening workforce planning, clinical recruitment and retention to ensure a stable workforce. We will build on the strengths of current employees to facilitate a training ground for clinical staff seeking career development in clinical audiology, specialist fields of audiology, business acumen or scientific and clinical research. Additionally, LHC is strengthening its performance appraisal and review processes to ensure that excellence is well recognised and acknowledged.

LHC places priority on understanding the needs of our staff. We aim to create an enjoyable and caring working environment to help retain the expertise we require to continue to deliver the best possible service. Part of this process has been the development of team building and team training days such as 'Den Days' and 'Communicake' sessions. It is the close-knit culture of LHC that sets us apart.

During the past year LHC staff attended a wide range of external training courses, seminars and in-house training activities. Internal training sessions, named 'Den Days', are held bimonthly to improve interstaff communication, trust and cooperation. 'Den Days' also facilitate knowledge transfer by providing opportunities for clinical training and complex case discussion. Guest speakers range from psychologists providing innovative techniques for counselling in aural rehabilitation to market analysts providing insight into the industry and the need for business acumen in clinical audiology.

Sharing clinical and patient service experiences amongst our staff is an important part of our strategy for teamwork and continuous improvement. 'Communicake' meetings take place monthly at each clinic and include discussions about service provision, forthcoming events and industry developments such as new product releases. 'Communicake' meetings are a relaxed and fun get-together where administrative concerns can be resolved, while delicious homemade cakes stimulate the taste-buds.

Our Services

LHC provide a wide range of services to our clients. We have maintained a competitive choice of products for both the private and government voucher patient market and have recently introduced a new range of Assistive Listening Devices (ALDs) for clients who require support for their listening needs, but for physical, medical or psychological reasons are not appropriate candidates for hearing aids. We are continually reviewing our place in the market and adjusting our services and the products therein accordingly.

lions hearing clinic report

Adult Aural Rehabilitation

LHC delivers hearing services to the private market and the government voucher market. Private patients are offered no rebates by the Australian government and must pay in full for hearing-related services.

The government voucher services are controlled and administered under the Australian Government Hearing Services Programme by the Office of Hearing Services (OHS) and funded through Medicare. To be eligible to receive free voucher services under OHS, a person must be an Australian citizen or permanent resident 21 years of age or older as well as one of the following: an Australian pensioner concession cardholder or dependant of a cardholder; a Department of Veterans' Affairs gold or white repatriation cardholder (or dependant); a sickness allowance recipient (or dependant); a member of the Australian Defence Force. OHS documents and reports complaints received against hearing health care providers. No complaints were raised with OHS against LHC in 2009/2010, demonstrating LHC's attention to the needs and wellbeing of our patients. Table 1 illustrates the voucher (OHS) and private distribution of LHC patients across each clinic for the financial year 2009/2010.

Table 1. Percentage OHS vs. private patient distribution across the LHC network

Lions Hearing Clinic centre location	Percentage of the business driven by OHS	Percentage of the business driven private services
Winthrop	56%	44%
Nedlands	67%	33%
Subiaco	11%	89%
Joondalup	59%	41%
Mt Lawley	23%	77%
Total	**47%**	**53%**

Specialist Aural Rehabilitation Services

At LHC we pride ourselves on the high quality services provided by our specialist audiologists, providing complex assessments for adults and children with more demanding rehabilitation needs. These clinicians have high-level skills and experience in the delivery of the following specialist services:

1. **Tinnitus Assessments and Management**
   The LHC tinnitus programme commenced in the early 1990s. It aims to provide assessment and treatment for tinnitus sufferers. LHC currently employs three specialist audiologists trained in the area of tinnitus assessment and counselling.

2. **Paediatric Assessments**
   For a child, hearing and speech are essential tools for learning, playing and developing social skills. Children learn to communicate by imitating the sounds they hear. If they have a hearing loss that is undetected and untreated, they can miss much of the speech and language around them. This results in delayed speech/language development, social problems and academic difficulties. Research indicates that four in 1,000 infants are expected to be born with permanent hearing loss. Children who receive early intervention have better language skills than those with later intervention. The critical age by which intervention should commence may be as early as six months. Early diagnosis, early intervention and an early start on special education programmes can help maximize a child's hearing. LHC offers hearing assessments to children of all ages to help identify hearing loss early in life.

lions hearing clinic report

Table 3. Number and range of paediatric assessments by LHC Centre Location 2009/2010

Lions Hearing Clinic centre location	Paediatric patients receiving services in 2009/2010	Auditory processing services in 2009/2010	Total paediatric services delivered by LHC in 2009/2010
Winthrop	71	87	158
Nedlands	156	129	285
Subiaco	0	0	0
Joondalup	330	77	407
Mt Lawley	48	0	48
Total	**605**	**293**	**898**

3. Paediatric Assessments and Auditory Processing Disorder (APD).

For children with APD trying to listen and learn in a classroom situation can be a harrowing, tiring and frustrating experience. Typically these children have normal hearing, but demonstrate a variety of listening skill difficulties also often impacting on language and attention, due to a weakness in the processing of acoustic information. This significantly interferes with listening and learning and presents many challenges for children with the disorder as they endeavour to cope and progress in their education. In addition to practical classroom strategies and other interventions often recommended for the child with APD, wearing a personal Frequency Modulated (FM) amplification system has long been considered an ideal form of management, providing quality amplification of a teacher's voice to a child in a noisy classroom. The LHC paediatric programme provides assessment and treatment options for children with APD. We have a well-established FM rental programme facilitating the increased speech and language development of children in our community.

We extend deep gratitude to the Lions Hearing Foundation and the Chamber of Commerce and Industry, WA for the very generous provision of five personal FM amplification systems in 2010 for use with our young patients who are identified as having APD.

Our Education for Allied Health

Each year LHC supports the ongoing training of university students in audiology and associated allied health programmes, forming close associations with UWA, Curtin University and Murdoch University. We engage undergraduate Masters of Audiology students from across Australia to help them develop their practical skills and clinical understanding of the audiological practices we offer to the community. First-year Masters of Audiology students shadow our experienced audiologists for eight to ten weeks, developing a greater understanding of the process involved in hearing assessments and aural rehabilitation. Second-year students are invited to develop their clinical skills by assessing and treating patients under the supervision of LHC's experienced audiologists. LHC offers employment to newly graduated students to facilitate their continued development once in the field. We have developed a Graduate Clinical Internship programme designed to train new graduates in the finer details of our profession.

Our Future Directions

Our goals for 2011 are to provide high-quality patient care in aural rehabilitation; to achieve significant commercial success, excellence and recognition as one of the Australia's leading hearing services; and to be the provider of choice for all hearing-related services for Western Australia.

Rebecca Bennett
Manager, Audiological Services

patient's story: mr brent lindner

Mr Brent Lindner is a 28-year-old carpenter who has recently moved to Brisbane, Queensland from his home in the industrial city of Gladstone, a regional city in central Queensland.

Mr Lindner was born with a severe hearing loss, as the result of his mother contracting Rubella during the early weeks of her pregnancy. He was diagnosed with a bilateral severe sensorineural hearing loss at the age of four months and fitted with two behind-the ear hearing aids at the age of six months.

Fortunately for Mr Lindner, his family home was close to the city of Melbourne, enabling him efficient access to the Royal Children's Hospital where he received treatment from some of the best paediatricians available. When a child is born with a hearing loss, the acquisition of language can be severely impeded. Hearing impairment is an invisible disability, which can lead to social isolation, educational problems and employment difficulties.

The family enrolled Mr Lindner at the John Pierce Centre Early Education Programme for Hearing Impaired Children, which was run by the Dominican Sisters in Ripponlea, a suburb of Melbourne. Fortunately, his parents realised the importance of those early months in a child's life, when they seem to simply eat and sleep, and in fact the listening that they do at this time is vital to developing speech. As the first teachers of their child, Mr Lindner's parents turned to the Early Education Programme for support and for information about hearing impairment to enable them to meet his needs. The Programme centred on the whole family, encouraging Mr Lindner's older brother and sister and eventually his younger sister to participate in some of the sessions, especially during visits to the family home. The support received by and the genuine care shown to all the family were invaluable and have been the basis on which Mr Lindner's education and his belief in himself have been built upon. He thoroughly enjoyed his time with the teachers of the deaf. It was a one-to-one play session, some of which was videotaped and kept as a record of his speech and development.

Mr Lindner completed Year 12 in 2000. To his credit he overcame many learning difficulties with the support of Visiting Teachers of the Deaf and learning support staff. It is the belief of his parents that the positive input received in his preschool years enabled him to have a good grounding for the rest of his school life and a positive attitude to learning. Mr Lindner successfully completed his TAFE training and on-the-job training to become a qualified carpenter several years ago. Recently he completed further training to gain his Queensland Building Trade Certificate, enabling him to be self-employed.

He moved out of his home town environment recently and is confidently living independently in Brisbane. Hearing aids have played an integral part in Mr Lindner's life, as he relies heavily on his hearing aids working effectively to be able to communicate every day. He has worn hearing aids every day of his life for the past 28 years. He does not think of himself as a person with a disability and he is endeavouring to make an independent life for himself without relying on any government assistance. Mr Lindner and his family are very grateful to LHC and to ESIA for the generous assistance given to him.

Mr Lindner's family have had a long association with Lions International as his grandparents Bill and Pat Keen were active members of the Lions Club of Gladstone and contributed to the local community in many ways through membership of the Lions Club of Gladstone and Lioness Club for over thirty years. Mr Keen was in fact Charter Member and President when the club started in the Gladstone area some forty years ago.

a success story from natalie bollen, paediatric audiologist

Part of my job as an audiologist at the Lions Hearing Clinic in Joondalup is to see children for hearing assessments. Most of these appointments are routine in that the children usually have normal hearing or show a minor temporary hearing loss due to a cold or ear infection.

On one recent occasion, a four-year-old girl presented with her parents for a hearing assessment. Her speech and language skills were delayed and they wanted to get some assistance prior to her starting school. I found out that she had had several previous hearing tests at other providers, indicating the possibility of a more permanent hearing loss.

My assessment of her hearing revealed a mild to moderate permanent hearing loss, for which hearing aids were urgently needed in order to improve her speech, language and listening skills. I immediately referred her to Australian Hearing, the organisation that provides hearing aids and rehabilitation free of charge to children who are Australian residents. Unfortunately, as the family had only resided in Australia for a short time, she was not eligible to access standard services from Australian Hearing. Undeterred I contacted a fellow paediatric audiologist at Australian Hearing, who recommended we send an application to Sydney asking for special consideration of this case. The special consideration was approved for this little girl, who has since been fitted with hearing aids in both ears and is now progressing in leaps and bounds.

In the words of her mum,

"Jordan's progress with her hearing aids is awesome!! Nearly everyone she speaks to understands most of what she's saying and she's losing her wariness to go and play with other kids in the playground and will often ask if they would like to play princess or chasing games."

"We are very, very thankful for what you have done for us, even more so because of the constant delays other hearing specialists were giving us. You are a big asset to the Lions Hearing Clinic. So from all the family we would like to say a big thank you to you and the rest of the Lions Hearing Clinic Team."

ESIA implant centre report

Over three decades of medical and engineering development, implantable devices have become a proven, accepted, clinical intervention which in turn has reconnected thousands of people with hearing impairments to the world of sound.

The ESIA Implant Centre, established in 2001 under the directorship of Winthrop Professor Marcus Atlas, is now at home in ESIA's new building, sharing the skills and expertise of a leading team of specialists, audiologists, researchers and educators. Our aim is to deliver and support alternative amplification options to clients who are not able to wear or do not benefit from conventional hearing aids. The ultimate goal is to reconnect people who have hearing losses with sound that is meaningful and that addresses their needs, such as participating in everyday social interactions and work, communicating, and forming important relationships.

Staff

The move in to the new building coincided with significant staff changes. Ms Ronel Chester-Browne was appointed as Clinical Manager, Implant Centre. She has 17 years' experience in cochlear implantation and for ten of those Ms Chester-Browne was coordinator for the second-largest paediatric and adult cochlear implant programme in South Africa.

With several senior audiologists on maternity leave, recruitment of experienced implant audiologists was a priority. Ms Gemma Ivey brought seven years of extensive audiology knowledge and experience working at ESIA to the Implant Centre. We welcomed implant audiologist Ms Katie Hill from the Melbourne Cochlear Implant Clinic, and Ms Azadeh Ebrahimi joined us and has recently completed in-house implant training.

Research

Researching new technologies to improve our knowledge and clinically applicable outcomes is a major focus of the Implant Centre. The partnership between research and active treatment makes ESIA a world class, comprehensive healthcare resource.

Outcome evaluation is an ongoing process. Clinicians and researchers use these evaluations to provide optimal care and service to clients. Audiologists in the Implant Centre were actively involved in several research activities during 2010. Several staff members presented papers at international and national conferences (see publications and presentations page 52 -56). Future studies are planned pending ethics application approval.

Staff Training and Support Group Activities

Ongoing training is critical in the fast-developing implantable devices field. Ms Ivey recently attended training with Cochlear Ltd in Sydney, bringing back valuable knowledge and skills. Ms Chester-Browne attended an advanced Med-El training course in Austria. Regular, onsite staff training has commenced thanks to the availability of Med-El and Cochlear representatives in the ESIA building.

Implant Centre audiologists continue to assist and support CICADA (Cochlear Implant Club and Advisory Association). Quarterly meetings are held at ESIA. Audiologists suggest topics and approach speakers to present on selected topics.

Clinical Meetings

Working with implantable devices involves a multidisciplinary team approach; consequently, a number of regular clinical and audiologist meetings are held to present cases, discuss and share knowledge and research, and make important team decisions on patient selection, rehabilitation and other important issues.

Sir Charles Gairdner Hospital

ESIA Implant Centre has a longstanding and close relationship with Sir Charles Gairdner Hospital Otolaryngology Department. Since the Implant Centre's inception we have been assessing and rehabilitating public cochlear implant patients. Funding in previous years has been limited; however, in 2010 additional funding was secured for a significant number of cochlear implants which allowed a much-needed reduction of the waiting list.

ESIA implant centre report

Auditory Brainstem Implants

2010 has been a very exciting year in developing and expanding our experience with Auditory Brainstem Implants (ABIs). The device is relatively uncommon, with only three implantations performed in Western Australia – all within our Centre. This year two young adults, both presenting with neurofibrometosis type II (NF2), have received ABIs. As a result of the NF2, vestibular schwannomas or acoustic neuromas grow on the acoustic nerves. These tumours are removed and the ABI is placed on the cochlear nucleus during one surgery. While being fitted with the device, the patient is connected to an ECG machine and closely monitored for any non-auditory responses which might result due to the auditory brainstem stimulation.

Image courtesy of Cochlear Ltd

The client and family are counselled extensively by our audiologists about what may be expected with the ABI. Although the device doesn't give a full range of hearing, it provides increased environmental noise awareness.

Some clients achieve good word recognition, while others achieve more general sound cues. In combination with lip reading, the cues help improve communication.

Balance Centre

The Implant Centre also encompasses the ESIA Balance Centre, which assesses patients with dizziness, vertigo and/or imbalance. Ms Jacqui Pollock took over as Coordinator of the Balance Centre in late 2009 and has since expanded the services to include additional assessment tools. Ms Lisa Giles has also recently joined the team to train as a vestibular audiologist. Moving into the new George Jones Vestibular Clinic in the ESIA building has allowed the centre to use a state-of-the-art facility, and we look forward to expanding the Balance Centre in the near future.

Summary

Implantable devices can be profoundly life changing. Our vision is to deliver a world-class, individualised service to clients who seek our help in order to ensure that their quality of life is the best it possibly can be.

Gemma Upson
Business Development Manager, Implant Centre

The ultimate goal is to reconnect people who have hearing losses with sound that is meaningful and that addresses their needs, such as participating in everyday social interactions and work, communicating, and forming important relationships.

implant recipient story: ms michele alexander

I don't remember the actual date – sometime in June. But I remember the day: a Tuesday. And I remember the feeling of complete isolation. I was scared. The night before I had gone to bed with a ringing in my ears...now I had woken up to...silence. No, not exactly silence – more a dull, white noise; a noise like being under water or in a goldfish bowl. Oh my goodness! What was happening?

This was the beginning of a journey for me, a relatively short journey in the scheme of things, from June to November 2007. A life-changing journey. A roller coaster ride of emotions. Anger and frustration, why me? How could I be deaf? But I was. Sadness at what I had lost. A feeling of weakness; a need to hide this new yet invisible disability.

That first few weeks while having tests, I would wake each morning and lie really still – first with my eyes shut – and listen really hard. Would today be the day I could hear birds sing? No. So it would be another day of struggling to cope with life in a hearing world. The sheer physical and mental exhaustion of forcing myself to listen, using inadequate hearing aids, and the challenge of not being able to use a telephone, hear TV or music, or join a conversation, just made me want to curl up in a ball and cry (which I did on a number of occasions). It was all just too hard. Even with the love and support of family and friends, the loneliness was excruciating.

"...the loneliness was excruciating..."

But there was hope: a cochlear implant. Here was an operation that would cost me over $30,000 (I had no private healthcare) and would completely wipe us out financially. Yet it would give me back my life. There was only one choice.

My cochlear implant is wonderful, and now I have two. My ritual of last thing off and first thing on each day is now part of my life. I wake each morning to my silence, stretch, thank the universe that I am alive to begin another wonderful day, reach for my cochlear implant and allow the world of noise to enter my world.

Michele Alexander

ESIA in the community

ESIA is focused on improving the hearing health of our community and continues to actively raise awareness by developing and delivering targeted programmes and education strategies to protect hearing.

As a world-leading medical research organisation, ESIA's commitment includes raising awareness of hearing impairment and providing education regarding treatment, management and prevention strategies. We are pleased to showcase a range of our community engagement projects below.

Cheers for Ears: Helping prevent hearing loss in the next generation

More and more children and young adults are in danger of developing permanent noise induced hearing loss (NIHL) from the widespread use of popular personal music players (PMPs). Recent studies have shown that the time spent each day listening to PMPs, even at the average volume levels, means approximately five to ten per cent of listeners are in danger of developing permanent hearing loss after as little as five years of exposure.

ESIA is tackling this preventable health problem with its Cheers for Ears programme. ESIA received $500,000 of Commonwealth government funding, to develop this hearing loss prevention programme for school-aged children.

The programme is delivered to children via classroom education sessions. These sessions include information on how we hear, what can cause hearing loss, the effects of hearing loss, learning to understand safe noise levels and strategies to avoid NIHL. We have visited 48 schools across the Perth metropolitan region, involving almost 4,000 year five and six children. This equates to five per cent of Western Australian children in this age group.

The programme is being developed by Ms Natalie Leishman, Health Promotion Coordinator, assisted by Ms Nicola Linton as research audiologist, and led by Dr Rob Eikelboom, Research Manager at ESIA. More information about the programme is available at www.cheersforears.org.au

Cheers for Ears Health Promotion Coordinator, Ms Natalie Leishman

ESIA in the community

Lions Hearing Bus

The Lions Hearing Bus provides a valuable community health service. Travelling around the Perth metropolitan area and into regional Western Australia, the bus offers mobile onsite hearing testing, often to those who might otherwise not have access to such a service.

The bus is run by the Lions Hearing Clinic in collaboration with the Lions Hearing Foundation of WA and the Lions Club of Stirling. It also provides training for audiology and speech pathology students.

The Lions Hearing Bus covers two main areas of service. The first is free hearing screenings at fairs, school fetes, shopping centres, aged care facilities and other community events. Hundreds of people are screened every year, with significant numbers being referred for further testing, proving that the bus is a truly valuable community service. The second area of service is mobile WorkCover hearing testing. Workplaces can book the bus to be onsite for these tests, minimising worker downtime significantly and saving companies time and money.

One of the annual events attended by the bus is Homeless Connect, a one-day 'one-stop-shop' run by The City of Perth that brings together councils, state government, federal government, businesses and community groups to provide free services to homeless people. In 2010 the bus again provided hearing screening tests and general ear care advice to a number of clients, some of whom were referred for full audiological hearing tests.

Below: Cheers for Ears winning posters by Angourie (Year 4, left), and Emma (Year 6, right).

ESIA in the community

Happy Hearing Training Programme: Helping Carers Care

Aged care often means looking after people with impaired hearing and those who use hearing aids. For carers at home and in the community and for staff in aged care facilities, understanding how to manage these issues can make all the difference to a healthy and happy outcome for everyone.

That's where the Lions Hearing Clinic's (LHC) Happy Hearing Training Programme brings success. Developed by ESIA staff member Ms Sharon Safstrom, the programme offers a fun, interactive one-hour training session. The programme is suitable for staff in aged care facilities, home and community care workers, paramedic staff, carers, volunteers, nurses, physiotherapists and the family and friends caring for someone with a hearing loss.

Ms Safstrom noticed that LHC often sees clients who are unable to manage their own hearing aids and need their carers to know how the devices work. A hearing aid user herself, Ms Safstrom's many years of experience at LHC and in aged care and disability services equipped her to design the programme to focus on quick, practical tips that can make all the difference. Understanding how to communicate appropriately and how a hearing aid works (as well as cleaning, repairs, fitting), means anyone looking after a hearing-impaired person is instantly able to improve his or her quality of life.

Happy Hearing Training sessions have been held in aged care facilities throughout Perth and will be taken to the South West region. The programme may also be expanded to include sessions on Assistive Listening Devices (ALDs) and sessions for teachers in the classroom.

In the aged care industry, the Happy Hearing Training Programme provides all documentation to support compliance with the Australian Government's Aged Care Accreditation Standard 2.16.

For carers at home and in the community and for staff in aged care facilities, understanding how to manage these issues can make all the difference to a healthy and happy outcome for everyone.

ESIA in the community

Busselton Healthy Ageing Study

ESIA, together with a large number of collaborators, has embarked on a research project known as the Busselton Healthy Ageing Study. Busselton, in the South West region of Western Australia, has been the base of a number of health studies since 1960, and many important medical discoveries have been made there by sampling, surveying and measuring the population.

This new phase commenced in 2010. Medical data will be collected from approximately 1,000 people every year for three years. It will focus on the 'baby boomers', those born between 1945 and 1965. Participants will undergo tests in hearing, balance, vision, mental cognition, lung function, heart function, amongst others. A large survey of health will accompany the physical tests.

The tests that ESIA have initiated are a comprehensive hearing test to measure the hearing, tympanometry to measure the function of the middle ear and an assessment of the eardrum using an otoscope. The survey will include specific questions related to Meniere's Disease, dizziness, tinnitus and hearing loss. We are also interested in the results of balance tests, mental health assessment and blood and genetic analysis. Other studies around the world have indicated that ear and balance disorders are linked to mental health, quality of life and even heart disease.

The Busselton Healthy Ageing Study is a way for ESIA to engage positively with the community on ear, balance and hearing disorders, and to use our research findings and knowledge to help educate the public and improve the health of all Australians.

Brett Robertson, PhD
General Manager

ESIA in the news

ESIA has worked with the media to share details about its research activities and how the findings can help contribute to better ear health in Australia and around the world.

In recent times the profile of ESIA has been raised within the community, particularly through regular features in the media. Extensive coverage received in The West Australian newspaper has increased community awareness of ESIA. The Institute has also received national news coverage regarding its exciting autologous bioengineered ear drum project. Our Cheers for Ears programme also featured prominently in The West Australian throughout the year.

Trial: Dr Rob Marano scans the media used to grow eardrum cells. Picture: Bohdan Warchomij

Lab eardrums 'on the way'

CATHY O'LEARY
MEDICAL EDITOR

Perth scientists are moving closer to marketing the world's first laboratory-grown eardrum that could help millions whose hearing has been damaged by infection or injury.

The Ear Science Institute Australia has confirmed that within weeks it will start long-awaited animal trials of its ground-breaking tissue-engineering invention, which could effectively allow patients to grow a new eardrum from skin cells.

It predicts the treatment could be available commercially within five years.

ESIA director Professor Marcus Atlas said that since making its initial discovery, the research team had been refining the silk scaffold used to form the structure of the eardrum and finding ways to maximise the growth of cells.

He said the engineered eardrum would be a quicker, less invasive treatment for perforated eardrums, which can burst through injury or because of chronic ear infections.

The new technique uses the patient's own skin cells and a special scaffold that replicates the human tympanic membrane which allows hearing.

Initial results from the trial in rats should be available next year and human trials are expected to follow.

CHEERS FOR EARS

HEATHER ZWICK

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Maric V, Eikelboom RH, Adeleke M, Higginbotham P. Evaluation of ear telehealth in an urban setting. Audiology Society of Australia XIX National Conference, Sydney, May 2010.

Marino R, Rajan GP, Atlas MD, Chapman E, Eikelboom RH. The use of electroacoustic stimulation for people with residual low frequency hearing. Audiological Society of Australia Annual Meeting, Canberra, May 2008.

Marino R, Rajan GP, Atlas MD, Chapman E, Eikelboom RH. The round window vibrant soundbridge in the management of mixed or total conductive hearing loss - A pilot study. International Conference of Audiology, Hong Kong, May 2008.

Marr T, Eikelboom RH, Freidland P. Tele-nasendoscopy: financial implications and clinical applications. Students in Health and Medical Research Conference (SHMRC), Perth, September 2010.

Marr T, Eikelboom RH, Friedland P. Tele-nasendoscopy: financial implications and clinical applications. Global Telehealth 2010, Fremantle, 10-12 November 2010.

Motakef S, Eikelboom RH. Validation of the AMTAS automated audiometer. 45th Conference of the South African Otorhinolaryngology-Head & Neck Society. November 2009.

Png LH, Eikelboom RH, Anandacoomaraswamy K, Atlas MD. A meta-analysis of tympanic membrane repair. Students in Health and Medical Research Conference (SHMRC), Perth, September 2010.

publications and presentations

Ryan A, Friedland PL, Lewis R, Lindsay A. Carotid blow out syndromes. Australia Society of Otolaryngology Head and Neck Surgery Annual Scientific Meeting, Sydney, April 2010.

Santa Maria PL. The genetics of wound healing in the tympanic membrane. Frontiers of Otorhinolaryngology, Melbourne, 28-30 July 2010.

Santa Maria PL. The use of keratolytics in the healing of acute tympanic membrane perforations – a double blinded randomised control trial. Australian Society for Otolaryngology Head and Neck Surgery Annual Scientific Meeting, Perth, April 2008.

Santa Maria PL. The genetics of tympanic membrane healing after perforation in rats - a microarray study. Australian Society for Otolaryngology Head and Neck Surgery Annual Scientific Meeting, Perth, April 2008.

Ghassemifar R, Redmond SL, Zainuddin, Chirila TV. Advancing towards a tissue-engineered tympanic membrane: Silk fibroin as a substratum for growing human eardrum keratinocytes. Journal of Biomaterials Applications.Vol 24 pages 591-606. 2010.

Santa Maria PL, McInnes RL, Redmond SL, Atlas MD, Ghassemifar R. The genetics of tympanic membrane healing after perforation in rats - a microarray study. Frontiers of Otolaryngology, Noosa, July 2008.(poster).

Santa Maria PL, McInnes RL, Redmond SL, Atlas MD, Ghassemifar R. The genetics of tympanic membrane healing after perforation in rats - a microarray study. ASOHNS WA Annual Scientific Meeting in Perth, November 2008.

Statham E, Yuen H-W, Eikelboom RH, Hoffman B, Atlas MD. Telephone use among cochlear implant recipients at Ear Science Institute Australia, 7th Asia Pacific Symposium on Cochlear Implants and Related Sciences, Singapore, 1-4 December 2009.

Tavora D, Ivey GE, Eikelboom RH, Miller S. A multi-centre study on the long-term benefits of tinnitus management using Neuromonics, American Audiology Association Annual Meeting, San Diego, USA, April 2010.

Teh B, Santa Maria PL, Redmond SL, Marano RJ, Atlas MD. Optimising tympanic membrane wound healing on silk bioscaffolds with selected growth factors. Frontiers of Otorhinolaryngology, Melbourne, 28-30 July 2010. (poster).

Teh B, Redmond SL, Yi S, Levin B, Santa Maria PL, Marano RJ, Eikelboom RH, Atlas MD. Tissue engineering of the tympanic membrane: Current Perspective. The Fourth Margaret River Region Forum: Pathways towards Molecular and Cellular Therapy, International Society for Cellular Therapy, Margaret River, Western Australia, April 2010.

Thyler I. Effects of Otologic Lasers on the Incus Surface: Implications for the heatcrimping of the nitinol piston. Australian Society for Otolaryngology Head and Neck Surgery Annual Scientific Meeting, Perth, April 2008.

Wun L, Friedland PL, Gatdatsy A, Atlas MD. Contralateral sinugenic orbital abscess – Beware communicating intersinus septum of frontal sinuses. Australia Society of Otolaryngology Head and Neck Surgery Annual Scientific Meeting, Sydney, April 2010.

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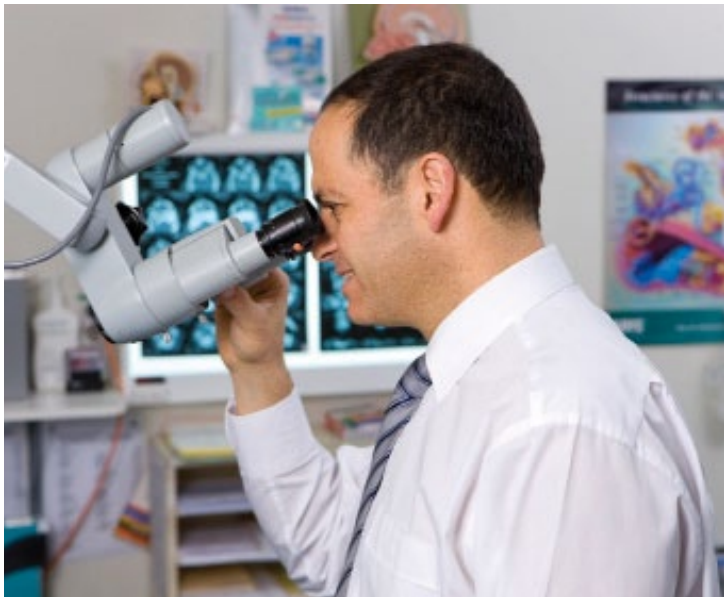

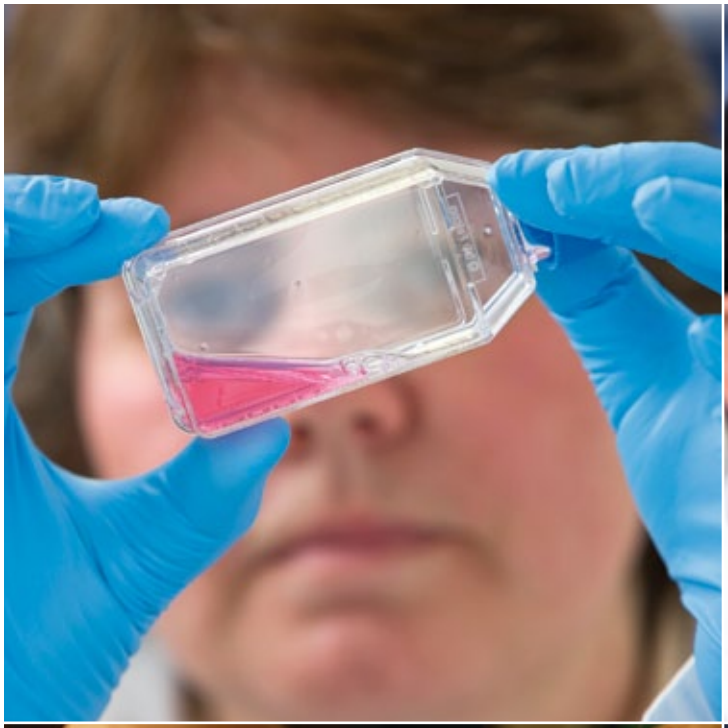

research and training grants report

Garnet Passe and Rodney Williams Memorial Foundation
Surgeon Scientist Scholarship
Tympanic membrane wound healing in rats*
Atlas MD, Eikelboom RH – awarded to Dr Peter Santa Maria
2006-2009
$188,090

Garnet Passe and Rodney Williams Memorial Foundation
Surgeon Scientist Scholarship
Tissue engineering scaffolds*
Atlas MD, Marano R, Eikelboom RH – awarded to Dr Brett Levin
2009
$70,000

Garnet Passe and Rodney Williams Memorial Foundation
Project Grant
Noise and age-related hearing loss*
Marano R, Atlas MD
2008-2011
$269,914

State Health Research Advisory Committee, Western Australian Department of Health
Research Translation Projects
A study of the cost and benefits of the introduction of ear telehealth in the Pilbara*
Eikelboom RH, Ellis I, Larson A, Atlas MD, Craemer R
2009-2010
$172,000

Raine Medical Research Foundation
Visiting Professorship Award*
Friedland PL, Eikelboom RH, Robertson WB, Atlas MD – for Prof De Wet Swanepeol, South Africa
2010-2011
$18,174

Sir Charles Gairdner Research Foundation
Videostroboscopy in laryngeal cancer screening and management of swallowing disorders*
Friedland PL
2010
$84,000

Lions Hearing Foundation
Epidemiology of Hearing and Ear Disease
Eikelboom RH, Atlas MD, Friedland PL
2009-2010
$70,000

Commonwealth Department of Health and Ageing – Hearing Loss Prevention Programme
Strategies and tools to prevent hearing loss of users of personal music players*
Eikelboom RH, Atlas MD, Upson G
2009-2012
$512,000

Commonwealth Department of Health and Ageing
Innovative Clinical Teaching and Training Grant
Head and Neck Surgical Skills and Clinical Training Centre*
Atlas MD, Robertson WB, Horley R
2010-2013
$2,745,860

MED-EL Elektromedizinische Geräte Gesellschaft m.b.H, Innsbruck, Austria
Remote mapping of cochlea implants
Eikelboom RH, Atlas MD, Robertson WB
2010-2012
$251,556

National Health and Medical Research Council
Project Grant
Neural mechanisms for enhancing hearing*
Robertson D, Hammond G, Atlas MD
2010-2013
$215,840

(* Competitive Grant)

board of trustees

Mr George Jones
B.Bus., FCIS, FAICD

Mr Jones has more than 35 years' experience in the mining, banking and finance industries and has been a director of a number of private and publicly listed companies. He was instrumental in overseeing the growth of Portman Mining Limited over the course of a decade, taking it from a start-up iron ore producer in the early 1990's to a six million tonnes per annum producer of direct shipping hematite ore with a market capitalisation of over $600 million in 2005. Mr Jones has a Bachelor of Business degree from Curtin University of Western Australia.

Mr John Schaffer
B Com(Hons), FCPA, FAICD

Mr Schaffer joined Schaffer Corporation Limited in 1972, was appointed operations manager in 1974, Managing Director in 1987 and has held the position of Chairman and Managing Director since 1988. Mr Schaffer has had extensive experience over the past 25 years in managing both private and publicly listed companies with operations spanning the globe in industries ranging from manufacturing and equity investment to property and development.

Professor Alan Robson
Vice-Chancellor, The University of Western Australia

Prior to his appointment as Vice-Chancellor in 2004, Professor Robson was Deputy Vice-Chancellor and Provost of The University of Western Australia from 1993. He has also held the positions of Foundation Director of the Cooperative Research Centre for Legumes in Mediterranean Agriculture (CLIMA), Dean of the Faculty of Agriculture, Head of the School of Agriculture and Professor of Agriculture (Soil Science) at The University of Western Australia. He is currently the Hackett Professor of Agriculture.

Professor Alan Robson is currently Chairman of the Group of Eight and Deputy Chairman of Universities Australia.

Winthrop Professor Marcus Atlas – ESIA Director
MBBS, FRACS

Winthrop Professor Atlas holds the Foundation Chair in Otolaryngology at The University of Western Australia and is the Head of the Ear Sciences Centre since 2000 and Director of the Ear Science Institute Australia since 2001. He is the current Chairman of the International Federation of Otolaryngology Advisory Committee in Otology and Neurotology and was invited to join the Court of Examiners, Royal Australian College of Surgeons, in 2006. He has represented Australia at numerous international clinical and basic research scientific meetings and international advisory boards and has delivered over 100 invited lectures.

board members

Mr Graeme Jolley – Board Chairman
B Com, Dip Bus, M Tax, FCA

Mr Jolley is a founding board member of ESIA and has held the role of Chairman since 2007. A chartered accountant with graduate and postgraduate qualifications in commerce, business and taxation, he describes his role with ESIA as unique and rewarding.

Mr Jolley, a Principal of Crowe Horwath, is a leading taxation practitioner specialising in advice, objections, appeals, and negotiations in all Federal and State taxation matters. He has Master of Taxation qualifications and is a State Councillor and a past State Chairman of the Taxation Institute of Australia.

Mr Jolley works to provide an open and independent environment for the Board to carry out its governance functions properly and believes ESIA is making a genuine difference to the health of West Australians. He describes it as an honour to have the opportunity to assist Winthrop Professor Atlas in his vision and dedication to create a world-renowned ear and hearing institute in Western Australia.

Mr Jolley says he is regularly struck by the support the organisation has received, the dedication of ESIA staff and the assistance ESIA receives from those in the wider community. He looks forward to helping the organisation continue to grow and achieve its potential.

Winthrop Professor Marcus Atlas – ESIA Director
MBBS, FRACS

Winthrop Professor Atlas is a surgeon scientist specialising in ear and hearing disorders by combining applied clinical and scientific research. He holds the Foundation Chair in Otolaryngology at The University of Western Australia and is the Head of the Ear Sciences Centre (ESC) since 2000 and Director of the Ear Science Institute Australia since 2001. Under his directorship ESIA and the ESC have created three major research groups involved in clinical research, computer and information science and molecular and cellular otolaryngology.

Winthrop Professor Atlas is a key member of the team that has developed a telemedicine system for otology which has been placed in a number of sites around Australia and is now undergoing commercialisation and internationalisation. He is presently a principal investigator in two major multicentre trials utilising cochlear implants and implantable hearing devices, including the round window application of the Vibrant Soundbridge for mixed hearing loss and the evaluation of the surgical suitability of a new cochlear implant (in conjunction with The HEARing CRC). His other current scientific research concentrates on the field of molecular and cellular tympanic membrane research working on a bioengineered tympanic membrane.

Winthrop Professor Atlas graduated in medicine in 1982 and received the Fellowship of the Royal Australian College of Surgeons in 1989. He received the Athelstan and Amy Saw Scholarship from The University of Western Australia (1990-1992) to undertake a fellowship in Cambridge, UK, and Pittsburgh, USA. He was invited to join St Vincent's Hospital and Clinic in 1992 and was involved in collaborative research programmes with the Garvan Institute of Medical Research.

Winthrop Professor Atlas has received international recognition in the areas of ear and skull base surgery. He was invited to join the Court of Examiners, Royal Australian College of Surgeons, in 2006. His innovative surgical education book and three-volume DVD are used throughout the world to teach ear and skull base surgery, and his surgical dissection courses have attracted hundreds of international surgeons for over ten years. The clinical and research fellowship programme at ESIA has a two-year waiting list. He has taken leadership roles in research as Director of the Ear Science Centre at the University of Western Australia and as primary supervisor of PhD candidates and senior author of publications.

Winthrop Professor Atlas was the editor of the *Australian Journal of Otolaryngology* (2001-2008) and has restructured the journal to create a large international readership, especially in the USA, in addition to establishing agreements with the leading otolaryngology journal, *Otolaryngology Head and Neck Surgery*. He is on the editorial boards of both Australian and international otolaryngology journals.

board members

Mr Simon Watters
BA, LLB, LLM

Mr Watters is a practising barrister, Senior Vice-President of the Law Society of Western Australia, Chairman of the Professional Combat Sports Commission and Chairman of the Lions Hearing Foundation. Having practised law since October 1990, Mr Watters brings his considerable legal experience to bear on his role with the ESIA board to complement the commercial background of other members.

Mr Watters completed a Bachelor of Arts at The University of Western Australia and then a Bachelor of Laws at The University of Tasmania. He undertook his articles at Page Seager in Hobart before travelling to England and was admitted there as a solicitor, practising for one year. Mr Watters was then called to the Bar by the Honourable Society of Gray's Inn in 1992. He practised as a barrister in England from 1992 until 1997. Whilst practising in London, Mr Watters received a Chevening scholarship in 1995 (being awarded the Zelman Cowen Award, the prize for the top Chevening scholar given out each year in Australia), after which he completed a Master of Laws in European Company Law at King's College, London.

Returning to Perth in 1997, Mr Watters was elected to the Western Australian Bar Association in 1999 and has since been practising as a barrister at the independent Bar, currently from Albert Wolff Chambers.

Mr Watters is able to recognise the importance of hearing research and improved treatment through his own family's experience. His youngest son has bi-lateral cochlear implants, the first implant at 18 months and the second when he was three.

Mr Watters provides a link between ESIA and the Lions Clubs of Western Australia, whose initial donation via the Lions Hearing Foundation began the process that culminated in the state-of-the art ESIA facility in Subiaco. He enjoys his role and time with ESIA's well-qualified and professional board and receives great rewards from the work of the organisation in assisting people, especially children, who are deaf or hard of hearing

Professor Donald Robertson
BSc(Hons) *UWA*, PhD *McGill*

Professor Robertson lectures in physiology at The University of Western Australia, and has a strong background in hearing research both within Australia and overseas.

Professor Robertson completed his undergraduate honours degree in physiology at The University of Western Australia under the supervision of one of the great names in modern auditory physiology, Brian Johnstone. He undertook postgraduate research on the efferent control system in hearing at The Brain Research Institute of The University of Brussels and continued his research in Canada, where he obtained a PhD on the mechanisms of sharp tuning in the cochlea. His postdoctoral work considered cognitive components of evoked cerebral potentials.

Professor Robertson returned to Perth as a Queen Elizabeth II Fellow and subsequently undertook a lecturing position in physiology at UWA, which he continues today. He has a longstanding research interest in the basic science of normal hearing and deafness. For many years he pursued this research driven by curiosity and a love of the process of scientific research, but has in the past decade developed an interest in trying to apply his knowledge to the understanding and treatment of hearing problems.

He finds the interaction he has with committed individuals from a wide range of backgrounds at ESIA especially stimulating. He hopes his time on the board will assist in developing the links between basic and applied hearing research at The University of Western Australia.

Mr Guy Le Page
BA, BSc, B App Sc(Hons), MBA, Grad Dip App Fin&Inv, M Aus IMM, FFIN

A former geologist and stockbroker, Mr Le Page brings considerable experience both in private and public companies, as well as board management and strategic direction, to the ESIA board. Mr Le Page is currently a director and corporate adviser of RM Capital and RM Corporate Finance specialising in resources. He is actively involved in a range of corporate initiatives from mergers, acquisitions and initial public offerings to valuations, consulting and corporate advisory roles.

board members

Mr Le Page was head of research at Morgan Stockbroking Limited (Perth) before to joining Tolhurst Noall as a corporate advisor in 1998. Prior to entering the stockbroking industry, he spent 10 years as an exploration and mining geologist in Australia, Canada and the United States. He is also a director of ASX listed companies Tasman Resources Ltd, Eden Energy Ltd, Fission Energy Ltd, Red Sky Energy Ltd and Enerji Ltd.

Mr Le Page holds a Bachelor of Arts, a Bachelor of Science and a Masters Degree in Business Administration from the University of Adelaide, a Bachelor of Applied Science (Hons) from the Curtin University of Technology and a Graduate Diploma in Applied Finance and Investment from the Securities Institute of Australia.

His interest in ESIA is driven both by the desire to be engaged in work that benefits the community and his confidence in the impressive team assembled at the Institute.

Professor Michael Quinlan
LLD, MB BS, MD, FRACP

Professor Quinlan is Professor of Medicine at the University of Notre Dame Australia, Clinical Professor of Medicine at the University of Western Australia and immediate past chairman of the St John of God Foundation. His considerable medical experience and track record of service to the goal of better health care for all West Australians are valuable additions to the ESIA board, and he believes strongly in fostering and encouraging collaboration amongst researchers.

After completing his undergraduate training at The Universities of Adelaide and Western Australia, Professor Quinlan undertook postgraduate training at Royal Perth Hospital and Princess Margaret Hospital, becoming a Member and then Fellow of the Royal Australian College of Physicians. He was also awarded the research degree of Doctor of Medicine by The University of Western Australia before completing his post-doctoral studies at the Johns Hopkins University in Baltimore, USA.

On his return to Perth, Professor Quinlan was appointed as a physician at Sir Charles Gairdner Hospital and Royal Perth Hospital and entered private practice as a consultant physician at St John of God Hospital, Subiaco, where he became Director of the Medical Teaching Unit. He is currently an Emeritus Consultant Physician at Sir Charles Gairdner Hospital.

Professor Quinlan was a member of the Planning Board of The University of Notre Dame, Australia, and an inaugural Trustee and Governor. In 1999 he was appointed the Foundation Dean of the College of Health and Professor of Medicine. Professor Quinlan was appointed Deputy Chancellor in 2006 and was appointed Chancellor in July 2008.

Professor Quinlan is a Trustee of St John of God Australia and immediate past Chairman of the St John of God Foundation. He was a former member and Chairman of the St John of God Health Care National Governing Board; an inaugural director of the Sisters of Charity National Governing Board; a patron of the Bendat Family Comprehensive Cancer Centre Appeal; a director of the Feilman Foundation; a director of the Child Health Research Foundation of WA; and was formerly a director of Raine Medical Research of The University of Western Australia and the WA Biomedical Research Institute. He was awarded the College Medal of the Royal Australasian College of Physicians in 1998, the Federation Medal in 2003 and the Hippvactic Bust by the Australian Medical Association (WA) in 2006.

His role with ESIA has great synergy with his other positions, and Professor Quinlan believes the close proximity of the new ESIA clinic to the St John of God Hospital, Subiaco, lends itself to a strong relationship between the organisations. He has great faith in the research team led by Winthrop Professor Marcus Atlas.

board members

Mr Peter Abery
BSc(Eng), MSc(Eng), MBA, FAICD, MIET, ISMP *Harvard*

Mr Abery brings to the ESIA board a vast array of experience in senior management roles. A graduate of Harvard Business School's International Senior Managers Program, he joined the ESIA board in 2008 after previously working with Winthrop Professor Marcus Atlas on the Institute's development.

Mr Abery's senior management roles have included chief executive officer and managing director of such companies as HPM Industries, Crown Castle UK and Australia, Vodafone Network and QPSX Communications. Current listed company directorships include, Norfolk Group Ltd, Nomad Building Solutions Ltd (Board Chairman) and pieNETWORKS Ltd.

Mr Abery holds a Bachelor and a Masters degree in electrical engineering as well as a Masters of Business Administration. He is a Fellow of the Australian Institute of Company Directors, a member of the Institute of Engineering and Technology.

Mr Abery believes that the prevalence of loss of hearing makes the work of ESIA in research, diagnostics and care particularly important and sees it as having a significant contribution to society. He believes that as the Institute grows, its research activities expand and the new building develops, it will become a more significant not-for-profit organisation. He hopes to bring his business skills and experience to assist the board, the Director, the management team and staff to achieve the goals set for the future of ESIA.

Mr Gregory Wall
MA(Future Studies), Dip AICD

Mr Wall brings to the ESIA board more than 30 years' experience in banking and finance and an extensive background in strategic planning and marketing.

Mr Wall was chief executive of StateWest Credit Society Ltd for 10 years, as well as managing director of Home Building Society until its merger with Bank of Queensland in 2007. He holds a Master of Arts (Future Studies) and has completed the Institute of Company Directors diploma course. He is a Fellow of the Financial Services Institute of Australia, a Fellow of the Australian Institute of Company Directors and a member of the Futures Foundation.

His current directorships include AHG Limited, Freo Group Ltd, Gold Estates (1903 Ltd) and the WA Football Commission. Mr Wall joined the board of the Ear Science Institute of Australia after seeing Winthrop Professor Marcus Atlas's skill treating balance problems related to the ear, a problem that had affected Mr Wall's wife.

While new to the board, he says he finds the commitment and backing of the staff and the supporters of ESIA exceptional. He hopes to bring his experience as a chief executive and non-executive director to assist the board, particularly in relation to financial matters.

cash flow statement

Financial report for the year ended 30 June 2010

	Note	2010 $	2009 $
Cash inflows (outflows) from operating activities			
Clinical services		4,300,964	3,750,643
Donations and gifts		997,212	4,961,421
Restricted grants		404,206	349,100
Rental		60,690	-
Interest and other income		54,686	69,786
Payments to suppliers		(1,054,755)	(1,154,353)
Payments to employees, rent and other operating costs		(3,830,172)	(3,443,861)
Net cash inflows from operating activities	**See below**	**932,830**	**4,532,736**
Cash inflows (outflows) from investing			
Building costs		(313,983)	(116,145)
Plant & equipment purchased		(88,309)	(30,120)
Computer software		(14,725)	(10,188)
Leased audilogical equipment		(268,147)	(125,312)
Net Cash (outflows) from investing		**(685,163)**	**(281,765)**
Cash inflows (outflows) from financing			
Payments made under building contracts		(8,137,655)	(4,900,000)
Investments		(606,861)	-
Loan		(600,000)	-
Payments made to secure ground lease		(519,254)	-
Payments made to secure sub tenants		(822,129)	-
Loan draw downs		10,543,665	(13,430)
Total cash (outflows) from financing		**(142,234)**	**(4,913,430)**
Net increase in cash and cash equivalents		75,433	(662,459)
Cash and cash equivalents at beginning of the year		948,286	1,610,745
Cash and cash equivalents at end of year	**3**	**1,023,719**	**948,286**
Reconciliation of net (shortfall)/ surplus for the year to net cash flows from operations			
Net (shortfall) surplus for the year		(123,116)	4,591,634
Depreciation on buildings, plant and equipment		431,442	143,248
Prepaid leasehold land expensed		252,000	-
(Increase)decrease in assets			
Receivables		267,060	(142,332)
Inventories		(86,784)	101,288
Increase (decrease) in liabilities			
Creditors		210,982	(197,614)
Restricted grants		(60,987)	12,064
Provisions		42,234	24,448
Net cash flow from operations		**932,830**	**4,532,736**

The accompanying notes form part of these financial statements.

balance sheet

Financial report for the year ended 30 June 2010

	Note	2010 $	2009 $
Assets			
Current Assets			
Cash and cash equivalents	3	1,023,719	948,286
Trade and other receivables	4	418,411	685,470
Inventories		231,335	144,551
Other	7 (i)	240,000	252,000
Total Current Assets		1,913,465	2,030,307
Non-Current Assets			
Building, plant and equipment	5	15,917,509	15,663,788
Investments and unsecured Loan	6	1,216,865	10,004
Other	7	2,508,083	1,406,700
Total Non-Current Assets		19,642,458	17,080,492
Total Assets		**21,555,923**	**19,110,799**
Current Liabilities			
Research grants in advance	8	76,085	137,072
Creditors and accruals	9	967,578	756,596
Amount due on building contract		1,098,602	9,236,257
Provision for annual leave		101,262	92,639
Total current liabilities		2,243,527	10,222,564
Non - Current Liabilities			
Interest bearing Loans	10	10,746,575	202,910
Provision for long service leave		33,612	-
Total Non current liabilities		10,780,187	202,910
Total liabilities		13,023,714	10,425,474
Net Assets		8,532,209	8,685,325
Accumulated Funds	11	8,532,209	8,685,325

The accompanying notes form part of these financial statements.

income statement

Financial report for the year ended 30 June 2010

	Note	2010 $	2009 $
Revenue and other income			
Gross surplus from clinical services	2	2,854,951	2,834,948
Donations and gifts		997,212	4,961,421
Rental		60,690	-
Restricted grants expense recovery		465,195	337,036
Interest and dividends received		39,596	55,196
Other Income		15,090	14,590
Total revenue and other income		**4,432,733**	**8,203,191**
Expenses			
Advertising & marketing		92,462	138,616
Audit fees		9,413	12,644
Building costs		39,812	177,789
Depreciation and amortisation			
Building		288,791	-
Plant & equipment		33,785	10,155
Leased assets		108,866	2,627
Fund raising expenses			
Salaries		220,821	337,548
Other costs		36,803	52,809
Ground Rent costs			
Paid during the year		48,000	-
Prepaid rent expensed	7(i)	252,000	-
Interest and Finance Costs			
Finance charges on leased assets		40,365	19,014
Interest bearing loans		215,865	-
Office & general expenses			
Research expenses		17,432	39,666
Rent and other costs for the clinics		292,508	293,810
Salaries and wages		2,566,426	2,306,236
Total Expenses		**4,555,849**	**3,611,557**
Net (Shortfall)/ Surplus for the year		**(123,116)**	**4,591,634**

The accompanying notes form part of these financial statements.

notes to and forming part of the financial statements

NOTE 1 STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

This financial report is a special purpose financial report prepared in order to satisfy the financial reporting requirements of the Associations Incorporation Act (WA), the Charitable Collections Act (1946) and the Charitable Collections Regulations (1947). The Finance Committee has determined that the Institute is not a reporting entity.

The financial report has been prepared in accordance with the requirements of the Associations Incorporation Act (WA), the Charitable Collections Act (1946) and the Charitable Collections Regulation (1947), and the following Australian Accounting Standards:

AASB 1018:	Statement of Financial Performance
AAS 5:	Materiality
AAS 8:	Events Occurring After Date

No other applicable Accounting Standards, Urgent Issues Group Consensus Views or other authoritative pronouncements of the Australian Accounting Standards Board have been applied. The financial report has been prepared on an accruals basis and is based on historic costs and does not take into account changing money values or, except where specifically stated, current valuations of non-current assets.

The following material accounting policies, which are consistent with the previous period unless otherwise stated, have been adopted in the preparation of this financial report:

Income Tax
The incorporated body is an exempt body for income tax purposes and accordingly no provision for taxation is required.

Inventories
Inventories of goods held at the Institute's clinics and are brought to account at the lower of cost or net realisable value.

Investments
Investments are brought to account at the lower of cost or net realisable value.

Research Grants in Advance
Research grants received in advance are recorded as a liability in the Balance Sheet until such time as they are expended. Once expended, the grant funds are brought to account as revenue in the Income and Expenditure Statement.

Property, Plant and Equipment
Property, plant and equipment are included at cost. The cost amount of all fixed assets are depreciated over their useful lives commencing from the time the assets are held ready for use. Property, plant and equipment that is purchase directly with specific grant funds is fully depreciated at the time of purchase. Such assets are assessed at the completion of specific research as to their ongoing value to the Institute and revalued accordingly.

Provisions for Employee Benefits
Liabilities for annual and long service leave in respect of employees services up to the 30 June 2010 are recognised in the provisions.

notes to and forming part of the financial statements

Note 2 Revenue	2010 $	2009 $
Gross surplus from clinical services	2,854,951	2,834,948

Note 3 Cash and cash equivalents	2010 $	2009 $
Cash at bank	892,993	691,913
Short-term deposits	24,592	94,000
Cash at bank for research and development	106,134	162,373
	1,023,719	948,286

Note 4 Trade and other receivables	2010 $	2009 $
Trade debtors	285,630	330,280
Less: Provision for doubtful debts	(1,575)	(1,575)
Other debtors	118,803	330,707
Prepayments	15,554	26,058
	418,411	685,470

Note 5 Building, plant and equipment

	2010 $	2009 $
Leasehold land and buildings at cost	15,551,440	15,237,457
Less: Accumulated depreciation	(288,791)	
	15,262,648	15,237,457
Plant and equipment	456,013	367,704
Less: Accumulated depreciation	(263,654)	(239,334)
	192,359	128,370
Computer hardware/software	169,571	154,846
Less: Accumulated depreciation	(140,648)	(131,183)
	28,923	23,663
Lease plant & equipment	671,210	403,063
Less: Provision for Amortisation	(237,631)	(128,765)
	433,579	274,298
Total Property, Plant and Equipment	15,917,509	15,663,788

The leasehold land is secured by a 50 year lease commencing from 18 July 2007 at market related rent The construction of the building was completed on the 5 October 2009.

Note 6 Investments and unsecured loan

	2010 $	2009 $
Shares in unlisted companies (at cost)	616,865	10,004
Unsecured loan	600,000	-
	1,216,865	10,004

The unsecured loan is made to a major tenant and is repayable based on certain earning criteria of the tenant.
It is envisaged that the first loan repayment will be made after 30 June 2011.

Note 7 Other non current assets

	2010 $	2009 $
Prepaid rent for leasehold land (i)	1,685,954	1,406,700
Tenant's lease incentive (ii)	822,129	-
	2,508,083	1,406,700

i) In terms of a condition of securing the leasehold land, the Institute paid for certain construction costs of the of the land owner. These construction costs are to be recovered in terms of an annual reduction in the cash rental payments for the use of the land. The amount recovered during the current year was $252,000 and the amount to be recovered during the next 12 months is $240,000 disclosed as an Other current asset.

ii)The Institute paid for certain fit out costs for a major tenant and these costs will be amortised in line with the rental income.

notes to and forming part of the financial statements

Note 8 Research grants received in advance

Grant	Opening Balance 30/6/09	Grants Received 2009/2010	Grants Expended 2009/2010	Closing Balance 30/6/10
Australian Society of Otolaryngology	1,250		822	428
Cochlear Implant Program	3,397	1,367	4,353	411
CTEC course	15,289	23,000	21,345	16,944
Fellowships	8,746		8,746	0
Tissue Engineering	50,301		8,373	41,928
HRF Tissue Engineering	395		395	0
Joondalup Family Health Study	54,636	898	39,236	16,298
ESIA Research funds	3,058	30,000	32,982	76
	137,072	55,265	116,252	76,085

Note 9 Creditors and accruals

	2010 $	2009 $
Trade creditors	548,398	477,473
Finance lease obligations	188,286	121,260
Accruals and other creditors	230,894	157,863
	967,578	756,596

Note 10 Interest bearing loans

	2010 $	2009 $
Bank loan- secured (i)	8,352,500	-
Unsecured loans	2,100,000	-
Finance lease obligations	294,075	202,910
	10,746,575	202,910

(i) The bank loan is secured by a fixed and floating charge over the assets of the Institute and is 5 year interest only loan.

Note 11 Accumulated funds

	2010 $	2009 $
Opening balance	9,321,825	4,730,191
Add: Current surplus for the year	(123,116)	4,591,634
	9,198,709	9,321,825
Less: Distribution to ESIA funded research	(666,500)	(636,500)
Closing Balance	8,532,209	8,685,325

Note 12 Future capital commitments

The Institute has minor building related expenditure amounting to $52,162 to be incurred in next 12 months.

acknowledgements

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