



soundscape

NEWSLETTER OF THE OTICON FOUNDATION IN NEW ZEALAND

MARCH 2012

\$100,000 research grant awarded to Auckland University

The Oticon Foundation has recognised the importance of research originating from the University of Auckland with \$100,000 funding being awarded to a team led by Professor Suzanne Purdy.

The research team will examine speech-evoked cortical evoked potentials (CAEPs) in people with hearing loss, wearing hearing aids and test whether the CAEPs are useful in objectively encoding speech information.

The results of the research are expected to benefit people with hearing loss by providing a better understanding of speech processing in noisy situations, which can be used in future studies of infants with hearing loss and helping manufacturers enhance speech processing in hearing aids.

More information will be available from www.oticon.org.nz as the research progresses.

NEWS UPDATE

31 March is the cut off date for this year's Foundation grants applications. The Foundation seeks applications for projects that help contribute to improving the lives of the hearing impaired.

More information about our criteria and how to apply are on the back page or from www.oticon.org.nz

Wellington's School of Architecture tests solutions for noisy classrooms

Students at five schools in the Wellington region will be the first to test a designed acoustic pod and ceiling baffle prototype as part of work to improve classroom acoustic environments.

The School of Architecture at Victoria University is using a \$13,000 Foundation grant to develop and

test innovative acoustic solutions in a classroom based learning environment.

The research involves developing prototype acoustic ceiling baffles and a 'pod' that will create a quiet zone that students can occupy.

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Investing in NZ-based hearing research



New Zealand research has captured the attention of the Oticon Foundation in Denmark - with a grant of over NZ\$100,000 going to a special project run out of the University of Auckland.

Academic research that will have long term benefits or impacts on hearing and hearing issues is now receiving substantial support from both the New Zealand and the Danish Oticon Foundations.

The University of Auckland, Victoria University and the University of Canterbury are working on

research that will help provide deeper insights into topics including the impact of hearing aids, specially designed acoustic solutions in a school environment and of ear surgery on hearing loss.

Along with these significant pieces of work, the Foundation has backed many community based projects that will benefit a number of locals in regions around New Zealand.

We are proud of the work we are supporting, and look forward to receiving new applications for funding by our deadline of 31 March 2012. The applications are now open.

Karen Pullar, Secretary to Trustees

THE OTICON FOUNDATION IN NEW ZEALAND WAS ESTABLISHED IN OCTOBER 1976.

INCOME GENERATED FROM THE FOUNDATION'S INVESTMENTS IS DISTRIBUTED TO GROUPS AND ORGANISATIONS SEEKING FINANCIAL SUPPORT FOR PROJECTS THAT BENEFIT THE HEARING IMPAIRED.

the oticon foundation

The National Foundation for the Deaf sharing and learning from the UK and Australia

Learning from, and collaborating with, hearing disability sector organisations in the United Kingdom and Australia is expected to put The National Foundation for the Deaf in a better position to deliver for New Zealanders over the next decade.

By receiving a much appreciated grant from the Oticon Foundation, the NFD's CEO Louise Carroll visited Action on Hearing Loss (formerly the Royal National Institute for the Deaf) in the UK and the Deafness Forum in Australia to review what was happening for people with hearing loss and hearing injuries internationally, and how the escalating demand for services was being dealt with.

"The demands on the NFD have escalated significantly in the past year as we support people with hearing impairment gain access to services. It is essential that we comprehensively review what is available technologically, how services can be best delivered and assess our structure to ensure it is fit for purpose," says Louise.

As a result of the Australian visit, a Memorandum of Understanding, supporting a closer relationship and collaboration between the NFD and the Deafness Forum has been developed and signed.

Louise examined how the sister organisations were structured, how they worked, their approach to advocacy, fundraising, research

and the wider services provided to individuals and organisations.

The research contributed to The National Foundation for the Deaf Strategic Vision:2020 which is a considered, strategic overview of the sector that will be published in the middle of this year.

www.nfd.org.nz



Louise Carroll with Peggy Sue the NFD team mascot

The University of Auckland Oticon Foundation Hearing Education Centre **Looking Back at 2011**

It was another rich and successful seminar programme over the past nine months. Highlights included:

May – Professor Birgitta Sahlén, Department of Logopedics, Phoniatrics and Audiology, Lund University Hospital, Sweden talking on "Swedish children and adolescents with cochlear implants in conversation with hearing peers."

July – Brief presentations from four PhD students in auditory neuroscience on their research topics. Miaomiao Mao on the developing mouse Dorsal Cochlear Nucleus; Nishani Dayaratne on the mechanisms of the generation of spontaneous neural activity in the developing auditory nerve and the effects of hypoxia; Kim Wise on her research into attention in tinnitus and behavioural treatment methods; and Gavin Coad presented his research on otoacoustic emissions and changes with hearing loss.

September – Dr David Welch, Department of Audiology, University

of Auckland. "What the Dunedin Multidisciplinary Longitudinal Study has shown us about hearing loss in the population".

Oticon Foundation Hearing Education Centre Spring Symposium

"Hearing Health Issues Facing the New Zealand Population" was the title of the annual Spring Symposium on 21 November 2011. The focus was on hearing disability in disadvantaged populations with 13 speakers including:

- Grant Searchfield, School of Population Health, The University of Auckland. *Whakarongo Mai and Maori hearing loss statistics, access and barriers.*
- Ofa Dewes, School of Population Health, The University of Auckland. *Hearing loss among Pacific Peoples in New Zealand and the Pacific.*
- Mary O'Keeffe, School of Population Health, The University of Auckland. *Hearing Issues Facing the Elderly.*

- Suzanne Purdy, Speech Sciences, The University of Auckland and Gerhard Sundborn, Auckland University of Technology. *Hearing loss, middle ear disease and auditory processing in 11 year olds in the Pacific Islands Families Study.*
- Louise Carroll, National Foundation for the Deaf. *Prisoner Hearing Health.*
- Jane McEntee, National Screening Unit. *Newborn Hearing Screening Programme.*
- John Harwood, Hearing Association. *Hearing loss among the elderly.*

What's coming up this year?

An exciting seminar programme for 2012 will soon be released with announcements in the coming month.

Keep an eye on the Oticon Foundation Hearing Education Centre website <http://www.fmhs.auckland.ac.nz/soph/depts/audiology/ofhec.aspx> and www.oticon.org.nz for more details.

Canterbury earthquakes affect ear surgery research project

The research team at the University of Canterbury's Department of Communication Disorders has been balancing research milestones with significant earthquake-related disruption over the past 12 months.

A Foundation grant is supporting research into methods to monitor hearing and reduce hearing loss during otologic surgery - or ear micro-surgery.

"We are examining the patterns of change in hearing thresholds in the year following a number of different types of middle-ear surgery," says Greg O'Beirne, Senior Lecturer in Audiology.

Restricted access to hospitals used in the study and to the University campus following the February earthquake has meant cancelled or postponed surgeries, and fewer patients being able to enter the study.

"We have extended the recruitment phase of the study, and postponed the intraoperative monitoring phase until this year," says Dr O'Beirne.



A commercial bone-conductor transducer adapted for the research

Despite these difficulties, PhD student Melissa Babbage has managed to obtain around 260 extended high-frequency audiograms and 95 tap oVEMP (ocular vestibular-evoked myogenic potential) recordings from over 75 patients undergoing middle-ear surgery.

Detailed analyses are currently being performed to determine whether any hearing loss identified is transient or permanent, and how audiometric thresholds change over the course of the first postoperative year for each type of surgery.

"The pattern of post-surgical change in hearing threshold that is of most interest to us is the closure of a low-frequency air-bone gap accompanied by acquired sensorineural hearing loss at higher frequencies. Assessing whether this high-frequency hearing loss is conductive or sensorineural in origin is difficult, given that conventional bone-conduction measurements only go up to 4 kHz.

"Addressing this problem has required some biomedical engineering, with us adapting a commercially available bone-conduction transducer for use in audiometric testing. The biological calibration means we can now establish bone-conduction thresholds at frequencies up to 16 kHz in our patients," says Dr O'Beirne.

[For a fuller report on the research project please visit www.oticon.org.nz.](http://www.oticon.org.nz)

Wellington's School of Architecture continued

The aim is to create classroom spaces that reduce the medical, social and language issues that affect the ability to learn.

Natasha Perkins, Lecturer at the School of Architecture, and her team have completed the design of the acoustic forms and during this first school term will be working with teachers and students to assess how they work.

The schools involved are Raumati Beach School, Khandallah School, Kaori Normal School, Island Bay School and Petone Central School.

The research is also supported by material supplier Autex New Zealand and technical support from Marshall Day Acoustics.

The prototypes have been tested in the Auckland Uni-services Limited acoustic laboratory with promising results.

The Foundation will update the progress of this research project on its website and in the next issue of Soundscapes.



PROJECT HIEDI

Hearing Impairment:
Early Detection and Intervention



PROJECT HIEDI - Keeping an active watch on newborn hearing screening

The Oticon Foundation has supported Project Hiedi in a number of ways over recent years. Project Hiedi was set up in 2002 to advocate for new born hearing screening - which has now been rolled out to all district health boards.

As part of our last grant round we awarded the Project funding to help continue its work advocating for the hearing screening programme to be successfully managed, monitored and evaluated.

Two other Foundation Grants at a Glance

Support towards getting a copy of the Concise NZ Sign Language dictionary in intermediate schools - to help support the teaching of NZSL which is part of the curriculum in intermediate schools and increase awareness of sign language and deafness among

young people and the wider school community.

Helping the Wairarapa Hearing Association Dangerous Decibels education programme - aims to educate young people about the prevention of noise induced hearing loss and hearing loss prevention.



How to apply for grants

Applications must include:

1. The name and address of applicant
2. If relevant, the organisation represented and position of applicant within the organisation, plus copies of latest balance sheet and annual report
3. Details of expenditure involved
4. Information about funding you are seeking from any other organisation for this or supplementary projects
5. Overseas travel details where applicable. Please state whether an applicant/s will be returning to New Zealand permanently after the visit is completed
6. How the hearing impaired in New Zealand will benefit from your project/research
7. Information about how you will publicise your project and its results. (We would like you to seek as wide an audience as possible)
8. Details about how you will promote the Oticon Foundation if your application is successful

Applicants applying for project funding should also include:

1. Title of project
2. Summary of project (not exceeding 150 words)
3. Qualifications of applicant relevant to project
4. Aims and design of project, and expected completion date

Applications for grants other than project funding should also include:

1. Details of grant requested
2. Reasons for request

Successful applicants will be required to:

1. Submit a report (five copies) within three months of completion of the project
2. Disseminate results or information from the project to as wide an audience as possible, such as to the bulletins and newsletters of professional groups, hearing impaired and Deaf groups
3. Acknowledge the Oticon Foundation in any reports or publications about your project/research

deadline

Grants are allocated annually.

Applications (an electronic copy (Word or PDF) and four hard copies) should be made no later than 31 March in any year.

Applicants will be notified whether their grant application has been accepted by 30 June of the same year.

Please address applications to:

The Secretary
Oticon Foundation in New Zealand
C/- PO Box 9128, Te Aro
WELLINGTON 6141
Phone: 0800 OTICON
E-mail: info@oticon.org.nz
www.oticon.org.nz

Oticon Foundation 2011 grant recipients

BWB PUBLISHING TRUST, NZ
Sign Language dictionaries in schools

NATIONAL FOUNDATION FOR THE DEAF, review activity of overseas organisations

NELSON HEARING ASSOCIATION, education posters

PROJECT HIEDI, support of ongoing work

UNIVERSITY OF AUCKLAND, ongoing funding for Oticon Hearing Education Centre

UNIVERSITY OF AUCKLAND (Dr Mary O'Keeffe), Kaegel Autism Centre, Cambridge University

UNIVERSITY OF CANTERBURY, research into prevention of hearing loss during otologic surgery

VICTORIA UNIVERSITY SCHOOL OF ARCHITECTURE, acoustic solutions for schools

WANGANUI HEARING ASSOCIATION, national conference speaker

WAIRARAPA HEARING ASSOCIATION, Dangerous Decibels education project

WESLEY COMMUNITY ACTION, assistive hearing system

VAN ASCH DEAF EDUCATION CENTRE, improved working environment post earthquake