

# Research Directions

Office of Research Services

## ***Do Infants Know What's Good for Them?***

**Dr Christine Kitamura from the MARCS Auditory Laboratories is undertaking research into hearing loss and speech in young children. This ARC Discovery project will lay the groundwork for the design of hearing aids amplified for infants, not adults as is the current practice.**



Evidence shows that early intervention for children with hearing loss is crucial to their language competence. In this project infants will be tested under normal speech conditions and under conditions that simulate hearing loss by varying the degree of spectral tilt, that is amplification of either high or low frequencies in the speech spectrum. The study will examine which spectral tilts infants can discriminate, which they prefer and whether their preferred spectral tilt facilitates speech perception.

The project will compare findings from testing children with normal hearing who are 6 months old, six years old and young adults. Three experiment sets will be conducted under normal hearing conditions and conditions that simulate hearing loss.

Dr Kitamura explained that: 'With screening programs now in place to test newborn hearing in a growing number of regions in Australia and around the world, there is a compelling case to devise a well-founded hearing aid prescription formula that meets the special needs of hearing impaired infants, who require optimal hearing conditions for early speech perception.'

This research may provide the opportunity for hearing impaired children to stay in step with normal hearing peers in terms of their language skills, in addition to flow-on benefits, such as savings in education and social security costs, and improvements to quality of life for the babies concerned. As a result of this research, the practice of prescribing hearing aids for infants based on adult frequency response requirements may become a thing of the past, as infant needs are identified and catered to.

Funding has been set at \$180,000.

Project Title: *Spectral Tilt: Do Infants Know What's Good for Them?*

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