



MEDIA RELEASE

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Online ear and hearing diagnosis to break sound barrier

In an Australian first, an online 'decision support system' is being developed to enable general practitioners to speed up the diagnosis of ear and hearing conditions.

The unique software – which is expected to be available for doctors in 12 months' time – will be a collection of ear and hearing diagnoses and associated symptoms collated from reports published by medical experts in international scientific and medical articles, reports and journals.

The software will use statistics from a database of medical reports to present a list of potential symptoms for a general practitioner, as they are selected, with the program suggesting the most likely diagnosis – and is expected to benefit doctors based in regional locations.

One of Australia's leading ear surgeons and Director of the Lions Ear and Hearing Institute (LEHI), Professor Marcus Atlas, congratulated the Institute's Senior Scientist, Dr Rob Eikelboom, for heading the research lead to the signing of a memorandum of understanding to develop the program with technology start-up, Paradigm Diagnostics.

"We are pleased to have signed a commercial agreement with Paradigm Diagnostics and we hope to finalise a licensing agreement shortly to advance this exciting technology," Professor Atlas said.

"The new decision support system ties in with our telemedicine program which is close to reaching commercialisation. (Ear telemedicine is a relatively new technology that enables patients with ear disease and hearing impairments to access ear specialists).

"We are not suggesting that doctors will be eventually replaced by computers as a result of this breakthrough in patient diagnosis," he said.

"What we are saying is that the software will enable a general practitioner to more easily diagnose an ear and hearing condition – particularly if they are unsure of a patient's symptom, or have difficulty contacting a skilled ear specialist.

"We look forward to finalising the software because it will be an extremely valuable tool for particularly for general practitioners and health workers located anywhere, as well as trainee ear and hearing specialists," Professor Atlas said.

Professor Atlas said the computer-aided tool would also play an important role supporting the Lions Ear and Hearing Institute's ear tele-health system, which uses technologies to improve access to ear specialists to reduce ear diseases.

Professor Stuart Bunt, head of Paradigm Diagnostics, has been developing the diagnosis software technology at the University of Western Australia for the last 10 years.

Professor Bunt said medical practitioners would benefit from the diagnosis software, which would also suggest symptoms to check or tests to perform.

"It really will be an innovative product that will speed up the diagnosis process for practitioners," Professor Bunt said.

"Paradigm Diagnostics looks forward to advancing this revolutionary diagnosis technology with the Lions Ear and Hearing Institute."

Professor Bunt also said the software would provide medical background information, photos, video and references to assist with diagnosing patients.

Paradigm Diagnostics recently developed similar software programs for hazardous chemicals and is currently developing other diagnosis programs for corneal disease and sexually transmitted diseases.

Almost 2.5 million people in Australia are affected by hearing loss, with tens of thousands of children and adults currently suffering from ear disease.

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About Lions Ear and Hearing Institute

The Lions Ear and Hearing Institute (LEHI) is a not for profit organisation that was established in 2001 and is a leader in research, ear surgery, audiology and hearing restoration in Western Australia.

The vision and focus provided by the specialised team at the Lions Ear and Hearing Institute has resulted in groundbreaking medical advancements in surgical techniques and the diagnosis and management of ear and hearing disorders.

LEHI has four key areas of research:

- **Tissue engineering** – Institute scientists are developing techniques to grow replacement parts of the ear to restore hearing.
- **Telemedicine** – Using technology to improve the access of people in remote areas to ear specialists to decrease ear disease in remote communities.
- **Hearing implants and aids** – Research into the improvement of these devices.
- **Virtual surgery** – Scientists are developing surgical simulators to assist with training and treatment for complex ear and skull base surgery.

For more information on the Lions Ear and Hearing Institute visit www.lehi.com.au

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