Range of cures likely for tinnitus

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(Medical Xpress)—Tinnitus researchers agree that there may never be a single cure for tinnitus, but instead a range of treatments for different types of tinnitus will be needed.

Developments in bioengineering technology may lead to the development of tools needed to identify each type of tinnitus.

This was the consensus when more than 200 researchers from 20 countries were in Auckland recently to discuss treatment of tinnitus or "ringing" in the head or ears.

The annual Tinnitus Research Initiative conference was in the Asia Pacific region for the first time and hosted by the University of Auckland at the Viaduct Events Centre.

Exciting new treatment methods from special hearing aids to virtual reality to MDMA (the drug Ecstasy) were introduced and debated by those attending.

Tinnitus may affect as many as 20 per cent of the population at some time. Despite it being common and often disabling, researchers largely ignored it for many years, says Conference organiser, Dr Grant Searchfield, an audiologist from the University of Auckland.

"Recently there has been an upsurge in interest both in tinnitus research and from clinicians," he says.

The Tinnitus Research Initiative (TRI), which was formed in 2006, recognizes the importance of innovation and collaboration to tinnitus research and a clear sense of purpose, to understand tinnitus and to find effective treatments.

"The TRI is unique in that it brings researchers and clinicians from many disciplines from all around the world together to focus on a single health problem," says Dr Searchfield.

Discussions took place on the new findings in the neuro-imaging of tinnitus; understanding how the brain and ear work to create the sounds; new drug research; mindfulness meditation; and treatments using hearing aids, sound, and brain stimulation.

Research is being undertaken to track down the parts of the brain responsible for this annoying and sometimes disabling affliction, he says.

"Much of the research presented showed that the auditory system does not behave in isolation. Instead regions of the brain involved in emotion, reaction and connections with regions of the brain and body not thought of being involved in hearing contribute to tinnitus," says Dr Searchfield.

He says an example of the complexity of tinnitus is the work being undertaken by a multidisciplinary research team from the University of Auckland's Centre for Brain Research.

Researchers from Audiology, Pharmacy, medicine, vision and sports and exercise science have worked together, from very different perspectives to cast new light on tinnitus. They have developed computer based training programs to change attention to tinnitus, and are examining how drugs might improve treatment effects.

Professor Susan Shore from the USA presented at the Conference, on

work from her laboratory demonstrating the strong interconnection between the auditory and somatosensory (touch) systems that can contribute to tinnitus being changed with neck or jaw manipulation.

Other research demonstrated that attention systems in the brain might help tinnitus pop out from normal sounds. Dr Alain Londero from Paris described how Virtual Reality could change how people thought about tinnitus.

Dr Searchfield presented, for the first time, on work showing how people hear tinnitus coming from "inner-space" using 3-Dimensional sound mapping.

Researchers also heard from leading experts in bioengineering, neuroscience, psychology and pain research, on how developments in their fields might be applied to understanding tinnitus and generating new treatments.

The possibilities of the drug MDMA as a means to change how people think about the tinnitus was discussed by Dr Rick Doblin and Amy Emerson of the Multidisciplinary Association for Psychedalic Studies (MAPS).

MAPS has undertaken work using LSD and MDMA to assist therapy for Post-Traumatic-Stress-Disorder and have begun to test the same techniques in tinnitus sufferers.

Provided by University of Auckland

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