



Unlocking the mind's mysteries

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IT is often said that the development of language was the key breakthrough in the evolution of the human species.

Countless generations later, perhaps the most surprising thing is how little we know about how the human brain enables us to develop language in early life.

But a multi-million dollar brain research laboratory officially opened at Macquarie University on Thursday could open the way to this fundamental knowledge.

The Australian Research Council-funded laboratory includes the southern hemisphere's first whole head magnetoencephalography (MEG) system and will soon include the world's first child MEG system.

MEG allows direct, non-invasive measurement of the time and location of brain activity.

Macquarie and its partner institutions will use the lab to study the neural activity underlying mental processing in both children and adults.

Cognitive research areas that will benefit from MEG analysis include language acquisition, schizophrenia, autism, dyslexia, and auditory processing.

Macquarie Centre for Cognitive Science Professor Stephen Crain explained that the use of MEG in cognitive science is very new.

"A lot of basic behavioural research will be revisited using this brain-imaging technology," he said.

The brain research lab is the product of collaborative research agreements between Macquarie University and Japan's Kanazawa Institute of Technology as well as the Yokogawa Electric Corporation.

Macquarie University vice-chancellor Professor Steven Schwartz praised the international collaboration it took to establish the lab at Macquarie as well as the potential benefits its research could bring to the world.

"Research is the most optimistic thing you can do with your life," he said.

"It's all about believing the world can be a better place."



Professor Stephen Crain and Kanazawa Institute of Technology president Ken-ichi Ishikawa announce the opening of the new brain unit.
Picture: DAVE SWIFT.