



Test for water toxins wins Peter Cullen Eureka Prize

A researcher whose work has revolutionised management of water supplies through enabling early, rapid and accurate tests for toxicity has won the *Land & Water Australia, Professor Peter Cullen Eureka Prize for Water Research and Innovation*.

Professor Brett Neilan, Federation Fellow, University of New South Wales, won the award for his research which identified the biochemical pathways responsible for the production of lethal toxins formed in cyanobacteria. Found in temperate and subtropical fresh water worldwide, cyanobacterial toxins can in large doses cause nerve damage or acute liver failure, and in prolonged low-level exposure can cause carcinoma.

As a result of Professor Neilan's work, DNA tests for toxins formed in cyanobacteria can be undertaken while cell numbers are low, with results available within hours, meaning prompt action can be taken before toxin levels become significant. Previously, toxicity tests were possible only when cell numbers were high, and results were not available for weeks. The testing techniques developed by Professor Neilan have been adopted by a range of international groups, including the World Health Organisation.

The Chair of Land & Water Australia, Ms Anthea Tinney, congratulated Professor Neilan on the award. "The *Land & Water Australia, Professor Peter Cullen Eureka Prize for Water Research and Innovation* recognises outstanding contributions to the sustainable use and management of Australia's water resources," she said.

"Professor Neilan's research is already improving the capacity to reduce risks in management of water resources not only in Australia, but internationally."

The *Land & Water Australia, Professor Peter Cullen Eureka Prize for Water Research and Innovation* carries \$10,000 prize money and honours the late Professor Peter Cullen, a former non-executive Director of Land & Water Australia who had a rare skill to resolve complex scientific issues into clear messages easily understood by all, a skill he used effectively to communicate the urgency of the crisis facing Australia's river systems.

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