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Media Statement

NEW NODE OFFERS WA SCIENTISTS ACCESS TO POWERFUL TOOL

WA medical researchers will soon have access to powerful new technology that offers the potential to reveal fresh genetic targets to tackle a broad range of diseases.

The opportunity for local scientists to make use of a technique known as a genome wide shRNA* screening follows the creation of the WA Node of the Australian Phenomics Network, based at the Western Australian Institute for Medical Research's (WAIMR) Perth campus.

WAIMR senior researcher and WA Node coordinator Louise Winteringham said the arrival in WA of genome wide shRNA screening would help open up new avenues of research for many scientists.

"Instead of identifying individual molecules involved in a process, this technique has the potential to identify whole networks of interacting molecules that may not have been associated with the disease or process being investigated," said Dr Winteringham.

"One of the main benefits of this screening technology is the prospect of discovering new, previously unconsidered targets that can be used to generate new medications.

"Given that only a handful of whole genome RNA knockdown screens have been carried out in Australia and worldwide, WA scientists are incredibly lucky to have access to the technology."

WAIMR acting director Professor Peter Leedman said phenomics offered a significant advantage over other research strategies.

"Often traditional strategies start by looking at a specific gene with an unknown function – a phenomics approach searches for changes in the whole person and, from there, the cause is found," he said.

"Because genes involved in diseases generally interact with other genes and the environment, phenomics is highly useful for looking at the big picture."

The Australian Phenomics Network (APN) was established in 2007 as part of the Federal Government's National Collaborative Research Infrastructure Strategy (NCRIS) with contributions from state governments, research institutions and the National Health and Medical Research Council (NHMRC).

Researchers seeking further information about the WA Node can contact Dr Winteringham on louisew@waimr.uwa.edu.au or (08) 9224 0326.

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**shRNAs (short hairpin RNAs) are short sequences of RNA – ribonucleic acid - that structurally resemble a hairpin. These are able to target specific genes to prevent them from making protein, resulting in physical changes to the cells.*

MEDIA CONTACT: Natalie Papadopoulos, WAIMR Media Consultant
m 0407 984 435, o 9381 8237, natalie@capturemedia.com.au