

Western Australian Institute for Medical Research (WAIMR)

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New Medication Leads in "Brake Cable" Cancer Gene

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WA researchers have taken the first step towards developing new anti-cancer medications that could activate a gene shown to block the growth of cancerous cells.

Led by Western Australian Institute for Medical Research (WAIMR) Director Professor Peter Klinken, the scientists have screened a large collection of drug-like molecules and recently identified a number of compounds which can increase levels of the Hls5 gene.

"This discovery is very encouraging and a great step forward in our quest to create new cancer treatments," said Professor Klinken.

"Because of the role Hls5 plays in keeping cell growth at a normal rate, we expect that these compounds will greatly slow down the growth of cancer cells."

The Hls5 tumour suppressor gene was reported by Professor Klinken's team in 2004.

The group's research has revealed that people who don't have the gene - or those who have a mutated or inactive form of the gene - are more likely to develop certain types of cancer.

In conjunction with WA-based biotechnology company BioPharmica, the WAIMR team has spent more than a year screening 70,000 compounds which increase Hls5 levels.

"Our preliminary data reveals that several of these compounds do indeed markedly slow down the growth of human cancer cells," said Professor Klinken.

"Importantly, we also know through computer modeling that nearly all of these compounds have drug-like qualities."

"From here, we take the research to the next phase of laboratory testing with the ultimate hope of investigating if one of these molecules can be used to create a fresh treatment that can slow growth of cancer cells in patients."

In June 2008, Professor Klinken was named WA's Citizen of the Year in The Professions category, recognising his tireless efforts in helping create an environment that fosters collaboration between the state's scientists and reversing the so-called "brain drain" by attracting world-leading researchers to WAIMR.



Professor Peter Klinken