



HARRY PERKINS INSTITUTE
OF MEDICAL RESEARCH

08 December 2015

New liver cancer treatment research at the Perkins

A major surge in global incidence of liver cancer and a predicted increase in mortality rates, in contrast to many other cancers, has escalated a demand for new liver cancer treatments.

The Harry Perkins Institute of Medical Research has been awarded a \$530,000 NHMRC Development Grant to fund the development of new liver cancer treatments based on its patented microRNA technology.

MicroRNAs are tiny RNA molecules that can be used to turn genes on and off in a person and have shown great promise as an entirely new way to treat cancer. They work in a completely different manner to the traditional cancer therapies, such as chemotherapy or the newer personalised treatments that target specific parts of the cancer cell growth pathway.

Chief investigator Professor Peter Leedman, who is the Director of the Harry Perkins Institute of Medical Research, said the funding will be applied to develop new drug compounds to target liver cancer. He will be working closely with Dr Chris Wraight, an expert in RNA biology with experience in commercialisation, who is the other key Investigator on the grant.

“Liver cancer is a major health burden globally, with a very poor prognosis. New treatments are urgently needed,” Professor Leedman said.

Professor Leedman said he welcomed the Prime Minister’s new National Innovation and Science Agenda, which encourages pioneering research and the commercialisation of innovative ideas.

Prime Minister Malcolm Turnbull said during the Agenda launch that it was absolutely critical “to commercialise an idea, a great invention, a great innovation, a great piece of research and then grow it into new sources of revenue, new jobs, new opportunities and new industries.”

Professor Leedman said he was focused on commercialising discoveries from the Perkins to impact on global health problems.

The liver cancer project will focus on developing microRNA “mimics” which simulate naturally occurring microRNAs and function with drug-like characteristics to combat cancer.

“We have developed proof-of-concept data showing that the microRNA is a powerful inhibitor of liver cancer growth,” Professor Leedman said.

The project builds on the successful preclinical studies carried out by Professor Leedman’s laboratory, which has shown that their microRNA discovery can knockout an essential growth receptor for cancer, helping to stem disease progression and tackle chemotherapy resistance.

The microRNA discovery formed the basis of a small biotechnology company called miReven which represents a partnership between the Medical Research Commercialisation Fund, the University of Western Australia and the Perkins. miReven has existing United States and European patents and is focused on commercialising the microRNA into a brand new therapy. Professor Leedman's team will utilise the funds to further develop the discovery so that it can be readily translated into an early phase human clinical trial of patients with liver cancer. If successful, it would represent a landmark in the treatment of this disease, and also illustrate the power of these new and emerging microRNAs as human therapies.

For further information, interviews and images, please contact:

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