

## **Project editorial piece for public release**

### **Round 3 – Innovation Grant 2017**

**Name of Grant Recipient / Institution:** The University of Queensland

**Project Title:** *A novel theranostic for pancreatic cancer*

**Principal Investigator:** Prof John Hooper

#### **1. Summarise the aim of your research**

The aim of our project is to develop new biological agents that can be used for two purposes for pancreatic cancer. The first is to develop an improved contrast agent for PET imaging of these patients. This agent, linked to a positron-emitting radioactive particle, will allow medical teams to accurately determine how far the cancer has spread, which is a critical issue for deciding what treatment is best for the patient. The second purpose is to use the biological agent, linked to a higher energy radioactive particle, for the treatment of pancreatic cancer. This is particularly important for the majority of patients who have disease that has spread beyond the confines of the pancreas and currently have very limited treatment options.

#### **2. What have the outcomes been to date?**

We have developed approaches to link our novel biological agents with both positron emitting and higher energy radioactive particles. We successfully tested the first of these showing that it accurately detects pancreatic cancer in a preclinical model of the disease. Importantly, we also developed a new more specific version of this biological agent and successfully tested it in PET imaging applications. Before the end of 2018 we expect to also test the therapeutic effects of our biological agents against preclinical models of pancreatic cancer.

#### **3. What are the next steps?**

Our results justify further work to develop our lead biological agents for imaging and treatment of pancreatic cancer. This will be achieved by modifying these agents so that they are both safe to be tested in humans, and in a format that is suitable for manufacture and distribution. The modified agents will undergo further testing to show that they are as effective as the lead agents for imaging and treatment against our preclinical models of pancreatic cancer. This will require additional funding of \$0.5M to \$1M. If successful, this work will be followed by further extensive development and testing so that the agents are suitable for use in clinical trials. This will require additional funding of \$1M to 3M.

#### **4. What has it meant to receive funding from the Avner Pancreatic Cancer Foundation?**

Funding from the Avner Pancreatic Cancer Foundation has for the first time allowed my laboratory to perform research on pancreatic cancer. While we have worked on other cancers for many years, it is our research in 2018 on pancreatic cancer has the greatest potential to be translated for the benefit of patients.