



**Name of Institution:** Hudson Institute of Medical Research, Monash University

**Project Title:** *A novel translational pipeline for the introduction of new immune-based therapies targeting localised and metastatic pancreatic ductal adenocarcinoma*

**Principal Investigator:** Professor Brendan Jenkins

**Grant:** Round 3 Innovation Grant 2017

### **Background:**

Professor Brendan Jenkins and his team aimed to show the preclinical efficacy of a novel series of immune-based therapies across a range of human pancreatic tumours, which were genetically screened to predict treatment responsiveness. The project also addressed the need to identify new genes that could be the target of novel therapeutic approaches.

### **The Research:**

The research evaluated the anti-cancer activity of an immune-based therapy in models for human pancreatic tumours that were genetically screened to predict responsiveness to specific treatments. Using patient samples and derived xenograft models (human tumour cells transplanted into mice), Prof Jenkins' team identified that a specific gene– together with an associated 6-gene 'signature'– can be used to predict therapeutic responsiveness of pancreatic tumours to a drug inhibiting that gene.

### **The Findings:**

The identification that a gene of the innate immune system can (when upregulated) promote pancreatic tumour growth and be used to stratify patient tumours that will respond to the gene's inhibition therapy has not only identified a new potential driver in Pancreatic Cancer, but also paved the way to now explore additional immune genes which may promote disease pathogenesis in Pancreatic Cancer. Furthermore, Prof Jenkins and his team found that the gene of interest has prognostic potential in Pancreatic Cancer.

As a result of the research, the team will continue to evaluate the clinical utility of the gene of interest in Pancreatic Cancer by further refining potential



biomarkers to predict responsiveness to the gene's inhibitor drug. They will also explore whether other genes of the immune system could serve as bona fide therapeutic targets in Pancreatic Cancer.

**As a result of this Project funded by the Avner Pancreatic Cancer Foundation, Prof Brendan Jenkins has presented findings at:**

- a) The Australasian Pancreatic Club, Brisbane
- b) Cancer Research Institute, Kanazawa University, Kanazawa, Japan
- c) Japanese Cancer Association Annual Meeting, Osaka, Japan