

Summary Report, June 2023: Dr Stella Man

2022 Fergus Scholefield Cancer Research Grant from Penguins Against Cancer



2022 grant recipient:
Dr Stella Man

>> Dr Stella Man at The Institute of Cancer Research is focused on expanding upon the limited treatment options currently available for DSRCT using the very latest cutting-edge technology.

As part of the team led by Professor Janet Shipley, Dr Man hopes to pinpoint key molecular events that drive the progression of DSRCT to identify the most effective therapeutic drugs and *help more patients survive this cancer.* "

"Desmoplastic Small Round Cell Tumours (DSRCT) are a rare and aggressive cancer that affects young people between 10-30 years old.

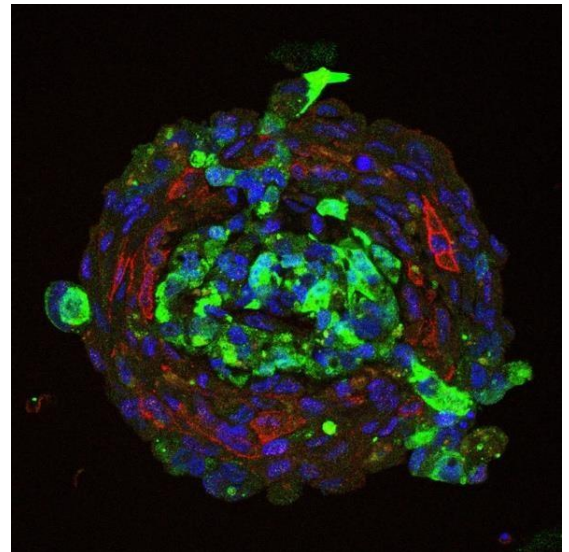
Because there are very few early symptoms, it is often diagnosed late when tumours have already spread around the body.

This makes it difficult to treat and reduces the chances of survival >>

Fergus Scholefield Cancer research fund Fergus Scholefield Cancer research fund Fergus Scholefield Cancer research fund

Desmoplastic small round cell tumours (DSRCT) are a rare form of cancer affecting children and adolescent patients. Current treatment includes intense chemotherapy and radiotherapy as there are no targeted therapies available.

The term “desmoplastic”, included in the name of this cancer-type, refers to the overproduction of cancer associated fibroblasts (CAFs) that support cancer cell growth and spread. Dr Stella Man, part of Professor Janet Shipley’s team at the Institute of Cancer Research, developed a method to grow live DSRCT cancer cells and CAFs together in the lab forming 3D spheroid structures that mimic the way they grow in patients. As can be seen in the cross-sectional image of a spheroid, the CAFs (red) naturally assemble around a central core of cancer cells (green) forming two distinct layers.



With funding from Penguins Against Cancer, the researchers are using the spheroid model, and archived patient material, to investigate the molecular interactions between the two cell types that drive tumour growth and spread using the latest cutting-edge technology called Spatial Transcriptomics. The aim is to specifically target and disrupt these key molecular interactions with clinically available drugs and improve patient outcome.

According to the latest update from Dr Man and the team, new data generated is currently being analysed by bioinformatic scientists and the first results will be revealed soon.