Client: Queens University
Source: Belfast Telegraph
Date: 06/09/2018
Page: 16
Size: 342
Value: 3279.78

Researchers at Queen's find a new weapon against cancer

BY LAUREN HARTE

A GROUND-breaking therapeutic process that forces bowel cancer cells to self-destruct and may improve survival rates for patients has been discovered by researchers in Belfast.

The research by Queen's University, Belfast is believed the first of its kind with the discovery of a new treatment strategy for bowel cancer patients not expected to survive, or those who are resistant to treatments.

The study was led by Dr Nicholas Forsythe of the Centre for Cancer Research and Cell Biology at Queen's, along with Professor Sandra Van Schaeybroeck and the late Professor Patrick Johnston, who was the university's vice-chancellor prior to his death last year. It compared two groups of bowel cancer patients one year on from their diagnosis.

The first group was considered to be doing "well" while the second had a poorer outcome.

The three-year project looked specifically at "gene signatures" to identify whether the stress-response pathway of a specific bunch of cells, called unfolded protein response (UPR), could be a potential new target for treatment.

The research focused on BRAF, a human gene that encodes a protein called B-Raf.

It is involved in relaying signals from the surface of the cell, resulting in cell growth and survival. When mutated, the gene has the potential to cause normal cells to become cancerous.

Dr Forsythe said: "This research focused on an aggressive sub-group of colon cancers known as 'Braf mutants'. These cancers are not only extremely aggressive, but they do not respond well to conventional cancer treatments.

"Unfortunately, this means patients diagnosed with a BRAF mutant cancer have a very poor prognosis."

Braf mutations occur in about 10% of bowel cancer cases.

"Our research has identified a cellular process that can be exploited in order to kill these cancer cells.

"Essentially, we can take advantage of the aggressive biology of these cancers and use it against them."

Dr Forsythe added that by using a specific combination of drugs the team was able to stress these cells to a point where they could no longer survive, dying in a process known as apoptosis; a form of cell suicide.

Professor Van Schaeybroeck added: "This research is good news for bowel cancer patients as further clinical trials investigating the effect of such agents could improve the survival outcome of patients with these BRAFMT colorectal tumours in Northern Ireland and beyond."

The researchers say that their next step will be to explore new drugs which can ultimately change the survival outcome for patients.

Client: Queens University
Source: Belfast Telegraph
Date: 06/09/2018
Page: 16
Size: 342
Value: 3279.78

Queen's University, Belfast researchers, Professor Sandra Van Schaeybroeck (right) and Dr Nicholas Forsythe