

## Media Coverage

**Company:** AusBiotech  
**Publication:** News.com.au  
**Date:** 17/10/11  
**Page:** Online

*Buchan*

Business Strategy | Communication | Public Policy

### SA researchers working on designer wheat to reduce colon cancer

**ADELAIDE scientists have helped create wheat varieties that will reduce the risk of colon cancer in consumers.**

The CSIRO and the University of Adelaide's Waite Institute are collaborating to use these types of wheat in the development of new foods, including breads and cereals, that can improve bowel health.

The new wheats retain certain types of fibre and starch that are currently lost because of food processing.

Chief research scientist at the CSIRO Dr David Topping said some types of dietary fibre and resistant starch had been lost from the modern diet, increasing the risk of colon cancer and other health concerns.

"We've taken out what we call the soluble fibres and what's called resistant starch," he said.

"The reason that we are putting them back is because they don't feed us, they feed our bacteria."

Dr Topping said there was more bacteria alive in the body, particularly in the bowel, than there were cells in the body.

"These bacteria metabolise the fibre and they produce compounds which promote the health of the bowel, the liver and indirectly the whole body," he said.

Dr Topping said the genetically modified wheat could be as close as two to three years from appearing on our shelves, because rigorous testing and development was still required.

Colon cancer kills about 4500 Australians each year, but Dr Topping said up to 80 per cent of the deaths were preventable. More than 11,000 new cases are diagnosed each year.

"A substantial part of that will be through the production of the grain," he said.

But he said other lifestyle factors, including reduced smoking rates and better exercise, would also help.

He said much of the loss of fibre from modern Western diets had been through processing technologies.

"In the '50s the idea grew that people consuming traditional diets high in unrefined cereal foods did not seem to get diseases that weren't there before," he said. "So, although they were better fed ... they had higher rates of coronary heart disease, diabetes, appendicitis, constipation and more."

People in certain cultures, particularly Africans who ate traditional diets, did not get the diseases at all.

"In fact, the rates were so low, they caused real genuine confusion as to what was going on," he said.

"These guys were eating whole grains, so everybody said 'aha, it's the fibre!'"

But he said increasing fibre promoted regularity - it did not lower the risk of these other diseases.

"In this country we've doubled our fibre intake since the late '70s and early '80s and that's certainly fixed constipation, but our rate of colon cancer is now probably the second or third highest in the world - it's certainly among the highest.

"This is all wrong because if the fibre theory was right then the rate of colon cancer should be coming down, but it isn't."

He said that was why wheat containing certain types of fibre - known as pentosans and glucans and resistant starch - were now being developed.

Similar products, using barley, had already been tested and developed, and were now commercially available.

Dr Topping said some fibre-rich cereals were already being tested on animals at the CSIRO.

He said the research and continued development would allow certain products to be tailored to help prevent various health concerns, including high cholesterol.

However, he emphasised that before these products were used to make consumer foods, there had to be assurance they would work to promote human health.

"If we thought, for one moment, that any of these new cereals would not promote human health we would not be doing it," he said.

Dr Topping will speak, along with other researchers, at a public forum at the Adelaide Convention Centre at 2.15pm on Sunday ahead of an AusBiotech conference beginning on Monday.