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## **RAPID REACTION: Safety of CSIRO GM wheat – experts respond**

Posted By [lbyford](#) On September 11, 2012 @ 3:53 pm In [Rapid Roundup, Twitter](#) | [Comments Disabled](#)

A report released on Tue Sept 11 by the Safe Food Foundation, which is linked to the environmental organisation Friends of the Earth, claims CSIRO-developed genetically modified wheat may cause Glycogen Storage Disease IV, resulting in an enlarged liver, cirrhosis of the liver, and failure to thrive. Below Australian experts react.

**Feel free to use these quotes in your stories. Any further comments will be posted here. If you would like to speak to an expert, please don't hesitate to contact us on (08) 7120 8666 or by [email](#) <sup>[1]</sup>.**

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### **Professor Rick Roush is the Dean of the Melbourne School of Land and Environment at the University of Melbourne**

“Not only are these claims of potential health risks from the CSIRO starch-modified wheat highly speculative, they have been advanced by three anti-GM campaigners who have deliberately bypassed independent scientific assessment of their claims. Instead, this has been launched such that will become another scientific-sounding scare story in cyberspace, a well-worn path of anti-GM so-called “science” by press release. Contrary to the claims being made, RNA interference technologies are already being considered in risk assessment internationally.

Having read the claims in detail, I have absolutely no fear in volunteering to serve as a human volunteer to test the CSIRO wheat.”

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### **Professor Peter Langridge is from the Australian Centre for Plant Functional Genomics at the University of Adelaide**

“Essentially we have two scientists who appear to be ideologically opposed to GM crops and who studiously ignore the majority of the scientific literature and data. They have now tried to give the appearance of credibility by writing a couple of scientifically flawed articles and rather than have these assessed through the normal process of peer review, they find someone with no real knowledge on GM crops to write a supporting statement and put this out as proper science. This is not helping an informed discussion about the technology. If people would like to get some real information on the safety or otherwise of GM crops and foods, they should look at a detailed report from the European Union

which summaries the results of 15 years' study involving over 400 laboratories\*\*."

\*\*A decade of EU-funded GMO research: <http://bookshop.europa.eu/en/a-decade-of-eu-funded-gmo-research-2001-2010-pbKINA24473/> [2]

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**Dr Ian Edwards, is Managing Director of Edstar Genetics Pty Ltd, Murdoch University. Dr Edwards has spent 46 years in wheat genetic research, including plant breeding, biochemistry, metabolism and gene modification. He served on BIOCOG – the Federal Government's Biotechnology Consultative Group prior to the establishment of the Office of the Gene Technology Regulator. He was formerly Chairman of the Ag-Bio Advisory Group in AusBiotech, Australia's biotechnology association**

"The recent claims by a lecturer (Jack Heinemann) at the University of Canterbury, New Zealand, calls into question both his timing and the manner in which he has expressed his concerns. A 'Risk Assessment and Risk Management Plan' was prepared by the Office of the Gene Technology Regulator and this was made public before the CSIRO field experiments commenced. If he could show valid concerns these could have been presented to the OGTR at any time and if his claims had merit they would have been acted upon. By choosing to go to the media and draw in some well-known anti-GM activists it does present questions regarding scientific objectivity. He admitted to not being aware of the gene sequence involved in the CSIRO experiments, but speculated on what a few alternatives might cause.

When a food crop is involved, or the composition of a food is altered, this comes under the jurisdiction of FSANZ (Food Standards Australia New Zealand) and CSIRO was required to undertake animal feeding experiments and one human nutrition study was also authorised. The type of grossly premature alarmism expressed in the report does not serve either science or the community but only furthers the goals of those ideologically opposed to GM food – even when the work is focussed directly on human health benefits."

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**CSIRO has issued the following statement in response to the claims:**

"CSIRO is at the forefront of research, both nationally and internationally, aimed at improving the quality and productivity of wheat. We use

both traditional breeding and GM approaches to do this, depending on which is the most effective way to achieve the desired goal. All CSIRO's work in GM is strictly managed in accordance with the Commonwealth Gene Technology Act via the Office of the Gene Technology Regulator (OGTR).

CSIRO has been working on the development of high amylose wheat for a number of years as the research provider to its commercial partner Arista. High amylose wheat has increased levels of resistant starch, which could have positive benefits for bowel health and people with diabetes. In this particular research project, both GM and non-GM versions of high amylose wheat are under development in parallel.

There are media stories published claiming that CSIRO's GM wheat research has the potential to lead to adverse health issues. These claims have not been published in a peer-reviewed journal. However, the claims will be considered by CSIRO and the regulatory bodies in the context of all other relevant research in this area.

CSIRO has OGTR approval to plant GM high amylose wheat at the CSIRO Ginninderra Experimental Station in Canberra (under OGTR DIRs 93 and 111), however no GM high amylose wheat trials have been planted this year under either DIR 93 or DIR 111.

While approval-in-principle for animal and human GM trials exists under DIR93 and DIR111, proceeding with such trials is contingent on Arista deciding to proceed and then obtaining approvals via CSIRO from the relevant Animal and Human Ethics Committees.

The following peer-reviewed publication includes in the supporting information a description of the construct that was used to generate the GM high amylose wheat lines. Regina A, Bird A, Topping D, Bowden S, Freeman J, Barsby T, Kosar-Hashemi B, Li Z, Rahman S, Morell M. 2006. High Amylose Wheat Generated by RNA-Interference Improves Indices of Large Bowel Health in Rats. *PNAS*. 103: 3546-3551."

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URLs in this post:

[1] email: <mailto:info@smc.org.au>

[2] <http://bookshop.europa.eu/en/a-decade-of-eu-funded-gmo-research-2001-2010--pbKINA24473/>: <http://bookshop.europa.eu/en/a-decade-of-eu-funded-gmo-research-2001-2010--pbKINA24473/>