

20th February, 2018.

**Att: OGTR**

**From: The Sustainable Agriculture & Communities Alliance**

**Re: Deregulation of new GM techniques:**

*SACA members are concerned that the Office of the Gene Technology Regulator (OGTR) is proposing changes to Australia's Gene Technology Regulations that would deregulate dangerous new genetic modification (GM) techniques such as CRISPR. Like other previous GM techniques, the new techniques have not lived up to the industry hype of reliability and have been shown to have hundreds of unexpected mutations.*

*It is in the public domain that other countries have already banned the new GM techniques in question. Over sixty international scientists have signed a statement calling for the new techniques to be strictly regulated as GMOs if they are released at all. In fact the new techniques are to be subject to a decision by the European Court of Justice and the European Union is still deciding on whether it will regulate organisms derived from the new techniques.*

*The proposed lack of monitoring and surveillance is a cause for great concern. If the new techniques are released they could be used for biological attacks by terrorists, for biological warfare, or inadvertently be the cause of human health or environmental and food production disasters, especially if experimented with by people lacking in knowledge of down-line unanticipated effects.*

***Early evidence of food problems from new food technologies:***

*Already there is evidence that the introduction of GM foods and the chemicals used with them can cause damage to people's health: for example, what kills bacteria in the soil and insects on food plants can also kill beneficial gut bacteria and alter the gut biome of people and animals. This has recently been linked to andipogenesis and obesity, as well as to other health problems, including food allergies and damage to the gut lining. (1) Studies in the UK have shown that since the introduction of GM crops and their associated chemicals food allergies have increased substantially.*

*Recent media headlines revealed a cover-up between the US EPA and Monsanto over the links between the chemical Glyphosate used on GM and the development of some cancers. This was reported in the media by Bloomberg and other sources. The health problems associated with GM and its associated chemical, glyphosate, is now*

*well known, and it is now also known that Monsanto and the US EPA knew of the potential health impacts around thirty years ago.*

*We need to be cautious, and keep the safeguards operating, as GM technology is very new and discoveries are being made all the time that show how important it is to eliminate as far as possible foreign substances such as new allergens and man-made chemicals from our diets and our environment. (2) (3) If the OGTR deregulates these new GM techniques anyone would be free to use them to genetically modify plants, animals and microbes. They could enter our food chain and our environment with no safety testing and no labelling. The results could be catastrophic.*

**Changes to the genomes in the food supply are permanent and could have inadvertent and possibly harmful effects on the consuming populations and the environment: see examples below:**

a) **World food disaster narrowly averted:**

An example of how such an inadvertent disaster could happen (and in this case was averted just in time) is the genetic alteration of a harmless soil bacteria for the purposes of breaking down waste in landfills. It was discovered by Dr. Elaine Ingham and her student, that the GM bacteria *Klebsiella planticola*, which was proposed to be released, actually killed plant roots and beneficial soil organisms. In this case, if the GM bacteria had been released, it would have spread around the world on wind and water cycles, and would have had a very damaging effect on growing plants and soils. It could have caused a world food crisis.

b) **New food risks from new food technologies:**

Apart from the risks of the spread of organisms that can harm agriculture and health, there is the other factor that is not spoken about when proponents of GM technology talk about the components of food. The changes to foods and diets consumed by people and farm animals are incorporated into their tissues and can be scientifically identified.

An example of this change to tissue components is when scientists at the University of California-Berkley carbon-tested strands of hair from typical Americans, they found that the "signature" C-4 carbon that indicates that meat in burgers came from corn (meaning the farm animal's diet came from corn) was 93 percent. In the hair of Europeans, the C-4 carbon signature was only 5 percent.

The principle that we are what we eat applies also to GM foods, and in fact the corn and soy eaten in the USA, which are also imported into Australia, are GM corn and soy. With the ubiquitous dissemination of foreign genes into such foods, and the rise in food allergies, it may be proven after the release and consumption of GM foods on a large scale, that the new pandemic health problems related to the gut microbiome have been caused by the premature release of changed properties of foods marketed by the GM/chemical companies.

### **The issues of responsibility and culpability in the case of release of these new techniques:**

The responsibility for the release of potentially harmful organisms does not just lie with the proponents, but also with government bodies such as the OGTR and FSANZ. If the new GM techniques are released for use in Australia, ahead of the rest of the world and without due scientific diligence, those responsible for the decisions lay themselves open to charges of legal culpability in the event of problems. The links between government, industry and government departments in promoting new technologies and harmful chemicals that have been inadequately researched for safety has been pointed out by the Union of Concerned Scientists. (4)

1. The new GM techniques that are of concern to other countries should be given a thorough scientific review, and all the information should be available to the general public;
2. The impact of GM and associated agricultural chemicals is now affecting beneficial insects such as honey bees and farm animals such as pigs and cows. *We should bear this in mind and keep in place regulations to prevent more damage to our environment and our health.*
3. From what we have learned about the new GM techniques, we advocate the banning of these new processes with respect to plants and food crops and living organisms.
4. Far from approving and releasing new GM techniques, there should be more research funded to investigate the down-line effects and unanticipated genetic defects caused by the technology. History is replete with examples of the release of damaging products and harmful organisms, and from the recent evidence, GM and glyphosate are only the most prominent of a range of substances that damage people's health and which will no doubt one day be banned. (ibid, Janesick, A and Blumberg, B.)
5. We stress that further research funding should not be allocated to the GM proponents but to independent

scientists, including researchers in the field of toxicology, immunology, gut health, population studies, genetics and linked environmental and food related sciences.

The members of SACA look forward to your response to our submission.

Yours truly,

Gillian Blair  
SACA Secretary  
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*References:*

1. *Janesick, A, and Blumberg, B. Endocrine disrupting chemicals and the developmental programming of adipogenesis and obesity. Birth Defects Research Part C, Embryo Today: Reviews 93(1) 34-50*
2. *Gore et al. 2015 EDC-2: The Endocrine Society's second scientific statement on endocrine-disrupting chemicals. Endocrine Reviews 36(6): E1-E150*
3. (Gupta, S. 2007. If we are what we eat, Americans are corn and soy.  
<http://www.cnn.com/2007/HEALTH/diet.fitness/09/22>)
4. *Union of Concerned Scientists, 2015. Bad chemistry: How the chemical industry's trade association undermines the policies that protect us. <http://www.ucsusa.org/center-science-and-democracy/fighting-misinformation/american-chemistry-council-report#WD3f9MkabES>.*