Testimony in Opposition of HB1191 before the MD House Health & Government Operations Committee 18 March 2014

L. Val Giddings, Ph.D. Senior Fellow, Information Technology & Innovation Foundation, Washington DC

Thank you for the opportunity to testify before you in opposition to HB1191, a bill that would mandate unfounded and discriminatory labels for the safest and most sustainable foods modern agriculture has produced.

HB1191 contains a host of "findings" and assertions alleging various harms that are offered in an attempt to persuade that the legislation is an appropriate remedy. Yet these "findings" and assertions are contrary to a strong scientific consensus on the safety of crops and foods improved through biotechnology, a consensus that is firmly based on a mountain of scientific research, data, analysis, and concrete experience. Far from advancing the objectives it claims to support, experience has shown that legislation like HB1191 in fact reduces consumer choice, raises consumer food prices, and confuses consumers with regard to safety. It would be bad public policy, certain to fall to legal challenge, and should be rejected.

You have heard a host of arguments, purportedly based in science and experience, presented to justify the legislation you are being asked to adopt. Each and every one of these arguments is either false, or fatally flawed. They have been advanced from an impenetrable denial of a robust worldwide consensus on the safety of crops and foods improved through biotechnology, and despite the fact that the objectives it claims to enable are already fully met.

You have been told this legislation is necessary to provide consumers with the ability to choose foods derived from crop varieties other than those improved through biotechnology. But consumers already have multiple means for exercising such a choice: they can buy food labeled USDA organic, because that marketing program prohibits the intentional use of crops improved through biotechnology in organic production. They can also buy food certified through the NonGMO project, and other private certifying schemes. They can even download a smartphone app with which they can scan a product's barcode in the grocery store aisle and determine whether or not it is a genetically improved food (GIF). Consumers already have multiple avenues through which they can exercise their freedom of choice.

You have been told that consumers have a "right to know" what is in their food, and that labels are required to inform them. But existing FDA regulations already require that any novel ingredient that may impact the qualities of a food in respect to health, safety, or nutrition MUST be identified on the label. This comes in the context of federal law that requires all food placed on the market to be safe, with criminal penalties for violators. The claim also ignores the fact that consumers have a right to labels that are accurate, informative, and not misleading, legal provisions already in place that would ensure this bill would fall to a legal challenge if it were adopted by Vermont.

You have been told that the processes used to produce GIFs are fundamentally different from those used to develop other foods, and that insufficient studies have been done to allow us to be confident of their safety. Such allegations are false. Plant breeders and credible scientists around the world generally agree that the techniques used to produce transgenic plants, derived directly from natural phenomena, are but an extension of traditional plant breeding, and that the potential hazards are the same (see http://www.amazon.com/Plants-Genes-Biotechnology-Maarten-Chrispeels/dp/0763715867 and http://www.amazon.com/Mendel-Kitchen-Scientists-Genetically-Modified/dp/030909738X).

The U.S. National Academy of Sciences explicitly rejected this claim in its very first publication in this area "Introduction of Recombinant DNA-Engineered Organisms into the Environment – Key Issues (National Academy Press, Washington, D.C., 1987) and has upheld this view in every subsequent study. The Government of Canada in its regulatory structure has specifically repudiated the assertion that plants improved through recombinant techniques are necessarily and intrinsically different than those produced through conventional breeding (see<u>http://www.inspection.gc.ca/plants/plants-with-novel-traits/general-public/novelty/eng/1338181110010/1338181243773</u>). The government of Australia has done likewise (<u>http://www.ogtr.gov.au/internet/ogtr/publishing.nsf/Content/about-index-1#act</u>) and the vast preponderance of scientists around the world concur in this assessment.

You have been told there are unresolved safety concerns about GIFS, and that they have been insufficiently studied. These claims are false, robustly contradicted by the <u>scientific literature</u>, worldwide scientific opinion, and <u>vast experience</u>. Indeed, the global consensus on the safety of these GIFs is stronger than that behind climate change.

Some representative voices include the following:

"Indeed, the use of more precise technology and the greater regulatory scrutiny probably make them even safer than conventional plants and foods; and if there are unforeseen environmental effects - none have appeared as yet - these should be rapidly detected by our monitoring requirements. On the other hand, the benefits of these plants and products for human health and the environment become increasingly clear."

--European Commission, Press Release of 8 October 2001, announcing the release of 15 year study incl 81 projects/70M euros, 400 teams

(<u>http://ec.europa.eu/research/fp5/eag-gmo.html</u> and <u>http://ec.europa.eu/research/fp5/pdf/eag-gmo.pdf</u>)

"The main conclusion to be drawn from the efforts of more than 130 research projects, covering a period of more than 25 years of research, and involving more than 500 independent research groups, is that biotechnology, and in particular GMOs, are not per se more risky than e.g. conventional plant breeding technologies..."

http://ec.europa.eu/research/biosociety/pdf/a decade of eufunded gmo research.pdf

"...because the technique is so sophisticated, in many ways it is probably safer for you to eat GM products - plants that have been generated through GM - than normal plant foods, if you have any sort of reaction to food, because you can snip out the proteins that cause the negative reaction to certain parts of the population."

--Sir David King, Chief Science Advisor, UK. The Guardian Unlimited, 27 November 2007 http://www.guardian.co.uk/gmdebate/Story/0,,2217712,00.html

"In contrast to adverse health effects that have been associated with some traditional food production methods, similar serious health effects have not been identified as a result of genetic engineering techniques used in food production. This may be because developers of bioengineered organisms perform extensive compositional analyses to determine that each phenotype is desirable and to ensure that unintended changes have not occurred in key components of food." (p. x).

--National Academy of Sciences, 2004. Safety of Genetically Engineered Foods: Approaches to Assessing Unintended Health Effects. National Research Council, Washington DC. 256pp. ISBN 0-309-53194-2. <u>http://www.nap.edu/catalog/10977.html</u>.

"...in consuming food derived from GM plants approved in the EU and in the USA, the risk is in no way higher than in the consumption of food from conventionally grown plants. On the contrary, in some cases food from GM plants appears to be superior in respect to health."

--- Union of the German Academies of Science and Humanities. Commission Green Biotechnology, InterAcademy Panel Initiative on Genetically Modified Organisms. Group of the International Workshop Berlin 2006. "Are there health hazards for the consumer from eating genetically modified food?" at http://www.interacademies.net/Object.File/Master/6/749/GMGeneFood.pdf

"If we look at evidence from [more than] 15 years of growing and consuming GMO foods globally, then there is no substantiated case of any adverse impact on human health, animal

health or environmental health, so that's pretty robust evidence, and I would be confident in saying that there is no more risk in eating GMO food than eating conventionally farmed food."

Anne Glover, Chief Scientific Adviser, European Commission, 2012 http://seedfeedfood.eu/wp-content/uploads/2013/01/flipbook.pdf

"GMO products have been tested to a particularly high extent and are subjected to rigid legislation control."

--Commission on Green Biotechnology, Union of the German Academies of Science & Humanities, at <u>www.abic2004.org/download/reportongmohazards.pdf</u>

"Food from GM Maize is more healthy than from conventionally grown maize... samples with the highest fumonisin concentrations are found in products labeled 'organic.' "

--Commission on Green Biotechnology, Union of the German Academies of Science & Humanities, at <u>www.abic2004.org/download/reportongmohazards.pdf</u>

"...the dangers of unintentional DNA mutation are much higher in the process of conventional plant breeding... than in the generation of GM plants. Furthermore, GM products are subject to rigid testing with livestock and rats before approval."

--Commission on Green Biotechnology, Union of the German Academies of Science & Humanities, at <u>www.abic2004.org/download/reportongmohazards.pdf</u>

"Whereas for conventional varieties there is no legal requirement for allergy tests of their products, for GMO products, very strict allergy tests are mandatory... For this reason, the risk of GM plants causing allergies can be regarded as substantially lower than that of products from conventional breeding."

--Commission on Green Biotechnology, Union of the German Academies of Science & Humanities, at <u>www.abic2004.org/download/reportongmohazards.pdf</u>

As for Hansen's claim of "unexpected effects" – to date there are none reported, and

"According to present scientific knowledge, it is most unlikely that the consumption of ...transgenic DNA from approved GMO food harbours any recognizable health risk."

--Commission on Green Biotechnology, Union of the German Academies of Science & Humanities, at <u>www.abic2004.org/download/reportongmohazards.pdf</u>

Unlike conventional or organic foods, bioengineered foods are routinely screened in the US and other industrial nations (per regulations rooted in the OECD guidelines) to ensure they have no

toxins or known allergens. The emergence of previously unknown, novel allergens is so vanishingly rare as not to constitute even a remotely legitimate concern¹. No such hazards have ever been reported from bioengineered foods in the scientific literature, nor any credible hypothesis through which such hazards might possibly arise.

The claim, therefore, that labeling is needed to inform consumers of potential hazards is not only unfounded, but the opposite of the truth: the <u>only safety differential ever reported</u> between bioengineered and other foods shows the bioengineered foods to be safer.

But the real objectives behind the campaign for legislation like this being advanced in a number of legislatures are to falsely stigmatise foods derived from crops improved through biotechnology as a means of driving them from the market. Proponents of mandatory labels have on occasion been honest in <u>acknowledging these objectives</u>.

¹ Substances featured in reports of "new" allergens fall overwhelmingly into the well-established categories of foods known to be allergenic, e.g. <u>http://www.sciencedirect.com/science/article/pii/S0091674995700358</u> and <u>http://www.karger.com/Article/FullText/113512</u>.



And <u>most recently</u> "mandatory labeling and bans, or GMO-free zones, should be seen as complementary, rather than contradictory."

Consumers have a right not to be deceived and misled.

A host of additional claims have been made to advance the mistaken notion that this legislation would meet a need. The facts contradict these claims at each and every turn. This legislation would add nothing to the consumer choice and safety already provided under existing law and policy, and should be rejected.