Connecticut Public Health Association
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TESTIMONY OF THE CONNECTICUT PUBLIC HEALTH ASSOCIATION 6519: AAC THE LABELING OF GENETICALLY ENGINEERED FOOD

JOINT COMMITTEE ON PUBLIC HEALTH
MARCH 15, 2013

Senator Gerratana, Representative Johnson and members of the Public Health Committee, my name is Colleen O'Connor and I serve as Advocacy Chair and as a member of the Board of Directors of the Connecticut Public Health Association (CPHA). Established in 1916, CPHA currently represents over 300 public health professionals committed to improving the health of all Connecticut residents through evidence-based policy and programs. CPHA is pleased to endorse **House Bill 6519**, which would require the labeling of genetically-engineered [also known as genetically modified (GM)] foods. **CPHA supports labeling of GM foods as there are significant potential health concerns that have not been adequately studied to prove their safety.**

Scientists have identified many health complications that could potentially arise from the use of GM foods in human food production. Despite these health risks, GM foods are regulated in the same manner as non-modified foods and labeled "generally recognized as safe" (GRAS) by the FDA [14]. This means genetically modified foods do not require premarket approval and instead, producers of GM foods are only *encouraged* to consult with the FDA regarding the safety and nutritional value of their products [15, 5]. **It is important to note that the research on the safety of GM foods is limited, and the studies demonstrating the safety and nutritional value of GM foods have almost exclusively been funded by the industry itself** [2]. **CPHA believes that more research, without professional conflicts of interest, is necessary for a better understanding of the safety and nutritional value of GM foods** [2]. **Furthermore, labeling will allow non-industry research scientists to identify, research and monitor GM food for human health effects** [2].

Scientists have identified several known or potential dangerous health effects of GM foods:

1. Serious allergic reactions—Genetically modified plants can create new food allergies: GM crops are engineered to include non-naturally occurring proteins and genes, thus a person allergic to a particular protein could have a life threatening reaction if unknowingly exposed to an allergen which has been inserted into another food [4, 5]. Food allergies are already becoming increasingly common over time, and as of 2007, four out of every hundred children had a food allergy [3]. A University of Nebraska study demonstrated that soybeans which were genetically engineered to contain Brazil nut proteins caused allergic reactions in people allergic to Brazil nuts [4].

2. Antibiotic resistance—Most GM plants, unlike conventional plants, contain antibiotic resistance genes inserted as markers to allow scientists to identify whether the gene of interest has properly transferred. However, this antibiotic resistance gene cannot be removed and can then be transferred to other organisms, worsening the problem of resistant bacterial strains [6].

3. Exposure to pesticides—Perhaps the greatest risk of harm from GM foods are from pesticides which are frequently found in large quantities in GM crops, such as Bt, an insecticide often found in GM corn [4,7]. Studies have shown that Bt can cause damage to cells in the body and to certain cells in vitro [7]. A recent study found pesticides associated with GM crops in the blood of pregnant women and fetuses, which is concerning as these chemicals have been linked to reproductive disorders, congenital malformations, fetal skeletal growth abnormalities and birth complications [8].

4. Herbicide resistance—GM plants are also engineered to be resistant to herbicides. This creates a resistance to multiple herbicides, which then requires more frequent applications of stronger chemicals, such as Paraquat, 2, 4-D, and Dicamba. Research has shown a link between Paraquat and the development of Parkinson's Disease, while 2, 4-D has been shown to cause cancer in animal studies and is a known skin and eye irritant which often affects agricultural workers [9]. Both 2, 4-D and Dicamba have been associated with birth defects as well as reproductive problems [10, 11].

5. Heavy metal exposure—Some plants are genetically modified to remove heavy metals from sludge-fertilized soil, which otherwise would not be safe for use in food agriculture. These plants then store the metals in inedible plant tissue. Scientists believe that it is possible for natural genetic changes to occur in these plants, causing the edible portions to become polluted with heavy metals which could then be ingested by humans [4].

Genetic engineering is known to be unpredictable, as genes do not have total control of an organism's biochemistry [12]. Even if these GM plants containing heavy metals are not meant for human consumption, it is possible for them to appear on the market. An example of this occurred in 2000, when StarLink, a GM corn that was never supposed to enter the food supply was found in taco shells [13]. While the concern here was of a particular allergen, the Union of Concerned Scientists worry that this could happen with GM plants containing heavy metals as well [4].

CPHA urges the Connecticut legislature to join the forty-plus countries (e.g., the European Union countries, Brazil, China, New Zealand, Japan, Russia, etc.) which have mandatory labeling laws for GM foods [16]. In a recent survey of over 100,000 United States households, 93% believed that genetically modified foods should be labeled [17]. CPHA also follows the lead of our national parent organization, the American Public Health Association, in supporting the labeling of GM foods [*19, 20*].

CPHA strongly supports **H.B. 6519: *An Act Concerning Genetically-Engineered Food,*** as requiring the labeling of GM foods will assure transparency by the GM food industry and also create a system which allows scientists to research and monitor GM foods for human health effects [22]. GM foods pose real potential health risks to humans and when human health is at stake, unbiased, rigorous research is necessary to inform decision making and protect the public's health [2]. **CPHA supports labeling as a step in the right direction to protecting Connecticut citizens from possible harms from GM foods.**

Colleen O'Connor, MPH
Chair of Advocacy, Board of Directors
The Connecticut Public Health Association

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