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RESOLUTION 60-15

Title: The Scientific Consensus on Genetically Modified Organisms

Introduced by: David Eisenbrey and Benjamin Lurvey for the Medical Student Section

Original Author: David Eisenbrey

Referred to: Reference Committee D

House Action: **DISAPPROVED**

Whereas, in recent years there has been an increasing public outcry for the labeling of food products containing genetically modified organisms (GMOs), and

Whereas, there is currently a lack of understanding by the general public of the basic science of geneticsⁱ, and

Whereas, the National Science Foundation, in its 2014 report on Science and Technology Indicators, reported that, “Less than half of Americans say they have an “excellent” or “good” understanding of what scientists and engineers do at work. Americans say they have a better understanding of engineers’ work than scientists’ work,”ⁱⁱ and

Whereas, the European Commission recently stated, “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,”ⁱⁱⁱ and

Whereas, as of September 13, 2013 the study, "An overview of the last 10 years of genetically engineered crop safety research," published in Critical Reviews of Biotechnology, reviewed 1,783 three articles and determined that there was as yet no significant hazards directly connected with the use of genetically modified crops,^{iv} and

Whereas, as recently as June 12, 2013 the American Academy for the Advancement of Science’s Board of Directors said, “GM crops are the most extensively tested crops ever added to our food supply. There are occasional claims that feeding GM foods to animals causes aberrations ranging from digestive disorders, to sterility, tumors and premature death. Although such claims are often sensationalized and receive a great deal of media attention, none have stood up to rigorous scientific scrutiny,”^v and

Whereas, the American Medical Association has specifically stated that: "Our AMA believes that as of June 2012, there is no scientific justification for special labeling of bioengineered foods, as a class, and that voluntary labeling is without value unless it is accompanied by focused consumer education,"^{vi} and

50 Whereas, the American Academy for the Advancement of Science's Board of
51 Directors has said, "There are several current efforts to require labeling of foods
52 containing products derived from genetically modified crop plants, commonly known
53 as GM crops or GMOs" and "These efforts are not driven by evidence that GM foods
54 are actually dangerous. Indeed, the science is quite clear: crop improvement by the
55 modern molecular techniques of biotechnology is safe,"^{v,vii} and
56

57 Whereas, the National Academy of Sciences (NAS), the National Academy of
58 Engineering, the Institute of Medicine, and the National Research Council are
59 independent, nonprofit institutions that provide science, technology, and health policy
60 advice under an 1863 congressional charter with committee members, who serve pro
61 bono as volunteers, and are chosen by the Academies for each study based on their
62 expertise and experience and must satisfy the Academies' conflict-of-interest
63 standards, and
64

65 Whereas, these institutions took a comprehensive look at the use of genetically
66 modified crops in the US, publishing a 200 page report in April of 2010 that
67 concluded, "GE crops have had fewer adverse effects on the environment than non-
68 GE crops produced conventionally. The use of pesticides with toxicity to nontarget
69 organisms or with greater persistence in soil and waterways has typically been lower
70 in GE fields than in non-GE, nonorganic fields," and
71

72 Whereas, regarding genes infiltrating into the wild, the NAS states, "Gene flow
73 between many GE crops and wild or weedy relatives is low because GE crops do not
74 have wild or weedy relatives in the United States or because the spatial overlap
75 between a crop and its relatives is not extensive," and
76

77 Whereas, at this time, GMO crop usage is less of an environmental concern
78 than traditional agriculture, and provides the improved crop yields critical to reduce
79 hunger and starvation,^{viii} and
80

81 Whereas, the major publication cited to support further genetically modified
82 organism negative publication, labeling and education was retracted by its primary
83 author for poor methods, lack of appropriate controls, usage of an animal model that
84 is known to have a high baseline level of tumors, application of many ill-defined
85 hypothesis that allowed the authors to select and amplify the most interesting ones^{ix},
86 and
87

88 Whereas, the National Academy of Sciences is currently in the review process
89 for a new report on genetically modified organisms and safety, due to be released in
90 2016^x; therefore be it
91

92 RESOLVED: That MSMS support the current scientific consensus which
93 demonstrates that genetically modified organisms pose no more harm to human or
94 environmental health than any other non-modified organism; and be it further

95 RESOLVED: That MSMS rescind its policy that supports the clear labeling of
96 all genetically modified organisms or foods containing genetically modified ingredients
97 in the state of Michigan; and be it further

98 RESOLVED: That MSMS oppose the labeling of products containing
99 genetically modified organisms in accordance with the findings of the American
100 Medical Association, the American Association for the Advancement of Science, and
101 the United States National Science Foundation, among others; and be it further
102

103 RESOLVED: That the MSMS review and report on the state of the science of
104 genetically modified organisms as pertaining to human health after the United States
105 National Academies of Science completes and publishes their report, “Genetically
106 Engineered Crops: Past Experience and Future Prospects” in 2016 and that MSMS
107 offer recommendations for possible resolutions or actions at that time.
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110 WAYS AND MEANS COMMITTEE FISCAL NOTE: None

ⁱ Lanie AD, Jayaratne TE, Sheldon JP, et al. Exploring the Public Understanding of Basic Genetic Concepts. *Journal of genetic counseling*. 2004;13(4):305-320.

ⁱⁱ National Science Board. 2014. *Science and Engineering Indicators 2014*. Arlington VA: National Science Foundation (NSB 14-01).

ⁱⁱⁱ EUR 24473 — A decade of EU-funded GMO research (2001 - 2010). European Commission. http://ec.europa.eu/research/biosociety/pdf/a_decade_of_eu-funded_gmo_research.pdf Published 2010. Accessed 28 Feb 2015.

^{iv} Nicola A, Manzo A, Rosellini D. An Overview of the Last 10 Years of Genetically Engineered Crop Research. *Crit Rev Biotechnol*. 2014 Mar; 34(1):77-88.

^v Statement by the AAAS Board of Directors on Labeling of Genetically Modified Foods. AAAS. http://www.aaas.org/sites/default/files/AAAS_GM_statement.pdf. Published 20 Oct 2012. Accessed 28 Feb 2015.

^{vi} AMA Resolution H-480.958 Bioengineered (Genetically Engineered) Crops and Foods. Accessed 28 Feb 2015.

^{vii} Pinholster G. AAAS Board of Directors: Legally Mandating GM Food Labels Could “Mislead and Falsely Alarm Consumers. AAAS. <http://www.aaas.org/news/aaas-board-directors-legally-mandating-gm-food-labels-could-%E2%80%9Cmislead-and-falsely-alarm>. Published 25 October 2012. Accessed 28 February 2015.

^{viii} The Impact of Genetically Engineered Crops on Farm Sustainability in the United States, Committee on the Impact of Biotechnology on Farm-level Economics and Sustainability, National Research Council. National Academies Press. http://www.nap.edu/openbook.php?record_id=12804 Published 2010. Accessed 28 Feb 2015.

^{ix} Seralini G, Claire E, Mesnage R, Gress S, Defarge N, Malatesta M, Hennequin D, Vendomois JS. RETRACTED: Long Term Toxicity of a Roundup Herbicide and a Roundup-tolerant Genetically Modified Maize. *Food and Chemical Toxicology*. 2012; 50.

^x 4221-4231. 10. Genetically Engineered Crops: Past Experience and Future Prospects. National Academy of Sciences. <http://nas-sites.org/ge-crops/> Accessed 28 Feb 2015.