

**UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD AND NUTRITION SERVICE**

In re: National School Lunch Program

Docket No. ___

PETITION FOR ADMINISTRATIVE ACTION

Submitted to:

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Date:

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Submitted by:

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I. INTRODUCTION

The U.S. Department of Agriculture (“USDA”) Food and Nutrition Service (“FNS”) is charged with providing nutritious foods to the nation’s children and needy adults while at the same time strengthening American agriculture. In this capacity, USDA purchases commodities to remove surpluses from the marketplace and delivers them through food distribution programs to state agencies. The state agencies then provide the commodities to schools and other outlets.

The Physicians Committee for Responsible Medicine is a nonprofit public health organization that advocates for and educates the general public about preventive medicine through proper nutrition. The Physicians Committee is a national organization representing 150,000 medical professionals, scientists, and laypersons, including more than 12,000 physicians. The Physicians Committee offers free nutrition classes throughout the country, conducts research, and advocates for healthier federal food policies.

In 2009, the Physicians Committee, through its subsidiary The Cancer Project, petitioned USDA to address USDA’s failure to adequately protect the nation’s children by unnecessarily exposing them to significantly increased risk of cancer. The petition requested that USDA prohibit the distribution of processed meat¹ and poultry through the National School Lunch Program due to the increased risk of cancer that results from consuming processed meat and poultry.

USDA denied the petition due to a purported lack of “consensus documents of the U.S. Government or of the leading world bodies with cancer expertise” but said that it would reconsider the request “[s]hould expert consensus develop.” According to USDA,

to justify the action, such consensus would need to include the institutional consensus (not simply an article published in an agency journal) of appropriate U.S. Government agencies with cancer expertise such as the National Cancer Institute, the President’s Cancer Panel, the Surgeon General, and the Centers for Disease Control and Prevention, and leading national and international bodies with recognized expertise on cancer.

A substantial body of scientific evidence, analyzed by government agencies and public health organizations, now attributes the consumption of processed meat to significantly increased cancer risk. Critically, a recent review by the World Health Organization provides new evidence that processed meat products are “carcinogenic to humans.”²

By continuing to allow the distribution of processed meat products to children, USDA fails to implement one of the National School Lunch Act’s³ primary goals, which is to safeguard and

¹ “Processed meat” refers to meat preserved by smoking, curing or salting, or addition of chemical preservatives such as nitrites and nitrates, including that contained in processed foods. See World Cancer Research Fund (“WCRF”) & American Institute for Cancer Research (“AICR”) (2007). *Second Report on Food, Nutrition, Physical Activity and the Prevention of Cancer: a Global Perspective* (“WCRF/AICR Second Report”) at xix.

² Bouvard V, Loomis D, Guyton KZ, et al. Carcinogenicity of consumption of red and processed meat. *Lancet Oncology*. Published online October 26, 2015.

³ 42 U.S.C. §§ 1751-1769j.

improve children's health. Given the ever-increasing body of evidence gathered by government agencies and public health organizations, the Physicians Committee submits this new petition, pursuant to the Administrative Procedure Act⁴ and USDA's implementing regulations,⁵ again requesting that the Secretary end federal support of processed meat in school lunches for children.

II. ACTIONS REQUESTED

The Physicians Committee petitions the Secretary to:

- (1) Discontinue the inclusion of processed meat and poultry on the list of commodities available for purchase from USDA under the Child Nutrition Commodity Programs, including the National School Lunch Program.
- (2) Discontinue reimbursement, under the Child Nutrition Commodity Programs, including the National School Lunch Program, to schools for lunches that include processed meat.
- (3) Discontinue the process of soliciting and accepting bids for redistribution, through the Child Nutrition Commodity Programs, of processed meat products, including ham, luncheon meat, pork sausage crumbles, pork sausage links, pork sausage patties, pork sloppy joes, and any other processed meat or poultry found to increase the risk of cancer.
- (4) Require the FNS nutrition education program to provide information and educational material to state agencies, schools, parents, and students regarding the harmful effects of processed meat on human health.
- (5) Encourage schools that offer processed meat to offer alternatives to processed meat in their meal plans and at school-hosted functions.

III. SCIENTIFIC EVIDENCE ESTABLISHES RISKS OF PROCESSED MEAT

The prevailing consensus among government agencies and public health organizations is that consumers should be warned of the dangers of consuming processed meat. Processed meat products, including ham, bacon, pastrami, salami, bologna, liverwurst, bratwurst, sausages, frankfurters, hot dogs, luncheon meats, and, depending on the processing, hamburgers and minced meats,⁶ represent a broad category of meat products that are often prepared and/or preserved by curing, smoking, salting, or adding chemical preservatives, such as nitrites and nitrates.

⁴ 5 U.S.C. § 553(e).

⁵ 7 C.F.R. § 1.28.

⁶ See *WCRF/AICR Second Report* at 117; Ward, M.H. et al. (2007). *Processed meat intake, CYP2A6 activity and risk of colorectal adenoma*. *CARCINOGENESIS* 28(6): 1210-1216, 1210.

World Cancer Research Fund / American Institute for Cancer Research (2007)

The link between eating processed meat and cancer has been long studied. To establish consensus on the state of evidence supporting links between specific types of food and cancer risk, the World Cancer Research Fund and the American Institute for Cancer Research created a panel that, over a five-year period, studied evidence regarding the extent to which cancer can be prevented through healthy patterns of eating and physical activity and created a comprehensive report based on its findings. Previously, the groups had worked together to create and publish *Food, Nutrition and the Prevention of Cancer: a Global Perspective* (1997), which quickly became the standard in the field and helped raise awareness about the importance of research on this issue.⁷

The panel's 2007 report ("WCRF/AICR report") reviewed all relevant research using the most scientifically valid methodology, provided a comprehensive assessment of the state of evidence linking foods to cancer risk, and provided a set of recommendations on food, nutrition, and physical activity to reduce the risk of cancer.⁸ The panel consisted of world-renowned scientists, including world leaders in research of the epidemiology and biology of cancer, nutrition, and public health.

To maximize objectivity and transparency, the project was separated into three distinct processes: collection, analysis, and recommendations. First, a task force developed a methodology for reviewing the voluminous amounts of scientific literature. Second, research teams collected and reviewed the material based on the developed methodology. And finally, the expert panel assessed and judged the evidence and agreed on recommendations.

Based on its review of 14 cohort studies and 44 case-control studies investigating processed meat,⁹ the WCRF/AICR report concluded that consuming processed meat is strongly associated with the specific increased risk of colorectal cancer. This form of cancer is the third most common cancer in men and women separately and the second most common cause of cancer death in men and women combined.¹⁰ According to the report, colorectal cancer risk increases on average by 21 percent for every 50 grams of processed meat—approximately the size of a typical hot dog—consumed daily. The WCRF/AICR report cited evidence that consuming processed meat may also contribute to cancers of the esophagus, lung, stomach, and prostate.¹¹

National Institutes of Health (2009) / National Cancer Institute (2010)

Two years later, scientists from the National Institutes of Health ("NIH") published a 10-year study of more than a half-million people that investigated the relationship between meat intake and mortality.¹² The study concluded that higher consumption of processed meat leads to an overall increased risk of mortality, cancer mortality, and cardiovascular disease mortality.¹³

⁷ *WCRF/AICR Second Report* at xiv.

⁸ *Id.*

⁹ *Id.* at 284.

¹⁰ American Cancer Society. *Cancer Facts & Figures 2015*. Atlanta: American Cancer Society; 2015.

¹¹ *WCRF/AICR Second Report* at 128.

¹² Sinha, R. et al. (2009). *Meat Intake and Mortality: A Prospective Study of Over Half a Million People*. *ARCH. INTERN. MED.* 169(6): 562-571.

¹³ Sinha, R. et al. (2009). at 565.

The NIH study confirmed and extended the findings of the WCRF/AICR report that consumption of processed meat and cancer are interrelated. Unlike the WCRF/AICR report, the NIH study evaluated new information to reach its conclusions rather than reviewing existing information. In a cohort of more than a half-million people, the NIH study confirmed the panel's conclusion that processed meat consumption is related to cancer. The NIH study attributed the cancer risk from processed meat to heterocyclic amines, polycyclic aromatic hydrocarbons, iron, and saturated fat.¹⁴ However, the NIH study went one step further than the WCRF/AICR report by specifying that higher intake of meat, including processed meat, contributes to cancer mortality.

The NIH study's lead author, Rashmi Sinha, Ph.D., is deputy branch chief and senior investigator with the National Cancer Institute. According to a 2010 National Cancer Institute report, "Red meat and processed meat are associated with an increased risk of colorectal cancer, and there is also suggested evidence for some other cancers, such as prostate cancer."¹⁵

President's Cancer Panel (2010)

The President's Cancer Panel's 2008–2009 annual report on environmental toxins noted that meats, when cured, form dangerous and carcinogenic nitrosamines and N-nitroso compounds. The panel recommended a preventive approach, as opposed to a reactionary approach, to such cancer-causing contaminants.¹⁶ In its executive summary, the panel acknowledged the convincing evidence showing a link between processed meat and cancer.

Dietary Guidelines for Americans (2010)

The most recent edition of the *Dietary Guidelines for Americans*, a joint collaboration between USDA and the U.S. Health and Human Services ("HHS"), advised that processed meat are a major source of solid fats in the American diet and are linked to colorectal cancer as well as cardiovascular disease.¹⁷

Centers for Disease Control and Prevention (2010)

The Centers for Disease Control and Prevention acknowledged in a 2010 *Morbidity and Mortality Weekly Report* that a diet high in processed and red meats increases the risk for colorectal cancer.¹⁸

Harvard School of Public Health (2011)

Since 2011, the Harvard School of Public Health has recommended replacing red and processed meat with nuts and beans.¹⁹

¹⁴ *Id.* at 569.

¹⁵ *Cancer Trends Progress Report: Red Meat Consumption*, NATIONAL CANCER INSTITUTE (2010), http://progressreport.cancer.gov/prevention/red_meat.

¹⁶ NATIONAL CANCER INSTITUTE, *REDUCING ENVIRONMENTAL CANCER RISK: WHAT WE CAN DO NOW* (2010), available at http://deainfo.nci.nih.gov/advisory/pcp/annualReports/pcp08-09rpt/PCP_Report_08-09_508.pdf.

¹⁷ USDA & HHS, *DIETARY GUIDELINES FOR AMERICANS*, 2010 at 27 (2010).

¹⁸ Henley SJ, King JB, German RR, Richardson LC, Plescia M. *Morbidity and Mortality Weekly Report. Surveillance of Screening-Detected Cancers (Colon and Rectum, Breast, and Cervix) --- United States, 2004–2006*, <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5909a1.htm>.

¹⁹ *Food Pyramids and Plates: What Should You Really Eat?*, HARVARD T. H. CHAN SCHOOL OF PUBLIC HEALTH (2011), <http://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/pyramid-full-story/>.

American Cancer Society (2012)

The American Cancer Society recommended in its guidelines on nutrition to limit consumption of processed meat, as well as red meat, including bacon, sausage, lunch meats, and hot dogs.²⁰

World Health Organization (2015)

This week the World Health Organization released a report announcing that processed meat products clearly cause cancer. Researchers from around the world examined more than 800 studies looking at the cancer-causing properties of red and processed meat. The authors highlighted a meta-analysis that found an 18 percent increased cancer risk per 50 grams of processed meat consumed and ultimately that processed meat products are “carcinogenic to humans.” In addition, the report noted a 17 percent increase in risk for colon cancer per 100 grams of red meat consumed and concluded that such products are “probably carcinogenic to humans.”²¹ Researchers also observed associations between red and processed meat products and stomach, pancreatic, and prostate cancers. Processing and other cooking methods for meat, including curing, pan-frying, and smoking, produce various carcinogenic chemicals.

* * *

Only a small percentage of cancer is inherited, leaving environmental factors, including food and nutrition, as the most important and modifiable.²² It has long been estimated that anywhere from 35 to 60 percent of cancer is attributable to diet.²³ Because the intestinal tract is in constant contact with foods, food additives, and the products of digestion, individuals who consume processed meat are at a significantly increased risk of developing colorectal cancer, compared with those who avoid consuming processed meat. The risk increases with increased consumption, as noted above. Accordingly, the WCRF/AICR report recommended that processed meat be eliminated from the diet.²⁴

A. Processed Meat and the Risk of Cancer

Processed meat and poultry products contain a variety of potentially carcinogenic chemicals, especially when smoked, cured, preserved, grilled, or cooked at high temperatures. These may include nitrates, nitrites, N-nitroso compounds (“NOCs”) such as N-nitrosodimethylamine (“NDMA”), heme iron, heterocyclic amines (“HCAs”), such as 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (“PhIP”) and 2-amino-3,8-dimethylimidazo[4,5]quinoxaline (“MeIQx”), and polycyclic aromatic hydrocarbons (“PAHs”), such as benzo[α]pyrene (“BAP”).²⁵ The associated cancer risks from these chemical components through the

²⁰ AMERICAN CANCER SOCIETY, AMERICAN CANCER SOCIETY GUIDELINES ON NUTRITION AND PHYSICAL ACTIVITY FOR CANCER PREVENTION (2012), available at <http://www.cancer.org/acs/groups/cid/documents/webcontent/002577-pdf.pdf>.

²¹ Bouvard V. et al. (2015).

²² Sinha, R. et al. (2009) at 569.

²³ National Cancer Institute. *Cancer Rates and Risks*. Washington, DC:1985, Doll R, Peto R. *The Causes of Cancer: Quantitative Estimates of Avoidable Risks of Cancer in the United States today*. J NATL CANCER INST. 1981; 66:1191-308.

²⁴ WCRF/AICR *Second Report* at 382.

²⁵ Jakszyn, P. et al. (2004). *Development of a Food Database of Nitrosamines, Heterocyclic Amines, and Polycyclic Aromatic Hydrocarbons*. J. NUTR. 134: 2011-2014, 2011.

consumption of processed meat products have been described for decades. N-nitrosamines and NOCs were identified as carcinogenic substances more than 50 years ago.²⁶

Nitrites used in meats as a preservative, as well as a coloring and flavoring agent, can combine with amino acid degradation products during the curing process or during digestion to produce N-nitroso compounds (nitrosamines or nitrosamides). Nitrates, used as preservatives, are converted to nitrites. In addition, processed meat cooked at high temperatures may contain chemical carcinogens, including HCAs and PAHs. Moreover, heme iron, plentiful in red and processed meat, promotes the production of N-nitroso compounds, and its iron content leads to free radical production.

Substantial evidence from cohort and case-control studies indicates that processed meat is a convincing cause of colorectal cancer. Meta-analyses find a 21 percent increased risk per 50-gram serving per day.²⁷

B. Chemicals that Increase the Risk of Cancer

NOCs: A body of scientific literature concludes that NOCs exhibit mutagenic and carcinogenic activity and are associated with an increased risk of cancer of the esophagus, oral cavity, pharynx, larynx, lung, and colorectum.²⁸ NOCs are formed as a result of the nitrosation of amines, amides, and amino acids by nitrites and nitrates, which are commonly used as food preservatives in processed meat products.²⁹ Consumption of processed meat, especially processed red meat, has a dose response consistent with the endogenous formation of NOCs, resulting in increased amounts of these compounds in the gastrointestinal tract.³⁰ Thus, due to the endogenous and exogenous exposure from NOCs through the consumption of processed meat products, consumers of these products have an increased risk for gastrointestinal cancers, such as colorectal cancer.³¹

NOC metabolites (metabolically activated NOCs) may contribute to an increased risk of leukemia as well as colon, stomach, esophagus, and brain cancer by inducing the formation of DNA-adducts and miscoding of noncomplementary bases during polyribonucleotide and

²⁶ See Bartsch, H. and Montesano, R. (1984). *Relevance of nitrosamines to human cancer*. CARCINOGENESIS 5(11): 1381-1393, 1381.

²⁷ WCRF/AICR *Second Report* at 123.

²⁸ See Cross A.J. et al. (2007).

²⁹ Larsson, S.C., Orsini, N. and Wolk, A. (2006). *Processed Meat Consumption and Stomach Cancer Risk: A Meta-Analysis*. J. NATL CANC. INST. 98(15): 1078-1087, 1085.

³⁰ See Lunn, J., Pollock, J. and Bingham, S. (2004). *The effect of increased red and processed meat on endogenous formation of N-nitroso compounds and DNA strand breaks in ileostomists*. CANCER EPIDEMIOLOG. BIOMARKERS PREV. 13: A 95-1852.

³¹ Mirvish, S.S. et al. (2002) at 35268 and See Jakszyn, P. et al. (2006). *Endogenous versus exogenous exposure to N-nitroso compounds and gastric cancer risk in the European Prospective Investigation into Cancer and Nutrition (EPIC-EURGAST) study*. CARCINOGENESIS 27(7): 1497-1501, 1499; Risch, H.A. (2003). *Etiology of Pancreatic Cancer, With a Hypothesis Concerning the Role of N-Nitroso Compounds and Excess Gastric Acidity*. J. NATL. CANCER INST. 95(13): 948-960, 950.

polydeoxyribonucleotide synthesis.³² It is important to note that no safe threshold dose, at which tumor formation would not be expected to occur, has been determined for NOCs. Moreover, NOCs that are carcinogenic in animals are commonly considered human carcinogens for regulatory purposes when establishing safety levels.³³

One of the most studied NOCs, NDMA, a nitrosamine present in processed meat products, was listed as a human carcinogen by the State of California in 1987.³⁴ Similarly, the International Agency for Research on Cancer (“IARC”), which is part of the World Health Organization, identified NDMA as a probable and possible human carcinogen.³⁵ HHS identified NDMA as a substance reasonably anticipated to cause cancer.³⁶

Heme: Heme, a red organic pigment, is the iron porphyrin component of hemoproteins, such as hemoglobin and myoglobin.³⁷ Dietary heme forms a highly cytotoxic metabolite that damages the colonic mucosa, resulting in the increased risk of gastric and colon cancer.³⁸ Due to the contribution of heme to NOC formation, the consumption of nitrate and nitrite-rich processed meat products leads to an increased risk for gastrointestinal cancers, such as colorectal cancer. Heme iron, as opposed to inorganic iron, is considered to be a principal determinant of endogenous gastrointestinal N-nitrosation by acting as a nitrosating agent, and, for reasons similar to those applied to NOCs, cannot have a determined safe threshold level.³⁹

HCAs: HCAs have been considered major contributors to mutagenicity of cooked meat products. Therefore, consuming these products poses a public health risk. Through metabolic pathways such as cytochrome-mediated (e.g., CYP1 and CYP2) N-hydroxylation and O-esterification by phase II enzymes, HCA compounds create genotoxic metabolites that are known mutagens and carcinogens.⁴⁰ HCAs form inside and on the surface of meats from creatine or creatinine, amino acids, and sugars as a result of exposure to high temperatures through cooking processes, including barbecuing, frying, roasting, and grilling.⁴¹

³² Mirvish, S.S. et al. (2002) at 35268; Bartsch, H. and Montesano, R. (1984). *Relevance of nitrosamines to human cancer*. CARCINOGENESIS 5(11): 1381-1393, 1384-1385; also see Bingham, S.A. (2000). *Diet and colorectal cancer prevention*. BIOCHEM. SOCIETY TRANSACTIONS 28(2): 12-16.

³³ European Commission, Scientific Committee for Food (1995). *Report of the Scientific Committee for Food*, 38th Series: 1-54, 20 and See Bingham, S.A. et al. (2002). *Effect of white versus red meat on endogenous N-nitrosation in the human colon and further evidence of a dose response*. J. NUTR., 132, 3522S–3525S; Cross, A.J. et al. (2003). *Haem, not protein or inorganic iron, is responsible for endogenous intestinal N-nitrosation arising from red meat*. CANCER RES., 63, 2358–2360.

³⁴ See Environmental Protection Agency Office of Environmental Health Hazard Assessment (“OEHHA”) (2015). *Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*. http://oehha.ca.gov/prop65/prop65_list/files/P65single082515.pdf (last visited Oct.26, 2015).

³⁵ See IARC (2007). *Agents Reviewed by the IARC Monographs, Vols. 1-98*, 4.

³⁶ See HHS, Public Health Service, National Toxicology Program (2005). *Report on Carcinogens, Eleventh Edition*.

³⁷ Balder, H.F. et al. (2006). *Heme and Chlorophyll Intake and Risk of Colorectal Cancer in the Netherlands Cohort Study*. CANCER EPIDEMIOLOGICAL BIOMARKERS PREV. 15(4): 717-725, 717.

³⁸ See Balder, H.F. et al. (2006) at 717; Lunn, J.C. et al. (2004) at 689.

³⁹ See Ward, M.H. et al. (2007) at 1215; Cross, A.J. et al. (2007); Jakszyn, P. et al. (2006) at 1497.

⁴⁰ See Gooderham, N.J. et al. (2001-a). *Food-Derived Heterocyclic Amine Mutagens: Variable Metabolism and Significance to Humans*. DRUG METABOLISM AND DISPOSITION 29(4): 529-534, 529.

⁴¹ Kikugawa, K. (2004). *Prevention of mutagen formation in heated meats and model systems*. MUTAGENESIS 19(6): 431-439, 431.

HCAs detected in cooked processed meat products that are suspected of increasing cancer risk include 2-amino-3-methylimidazo[4,5-f]quinoline.⁴² The HCAs 2-amino-3,4,8-trimethylimidazo[4,5]quinoxaline, MeIQx, and PhIP are specifically linked to an increased risk for colorectal cancer.⁴³ The State of California has identified PhIP and MeIQx as known human carcinogens since 1994,⁴⁴ and the IARC labeled them as possible human carcinogens in 1993.⁴⁵ Because there are no known safe levels of exposure, PhIP, MeIQx, and any other likely genotoxic compounds should be avoided as much as possible.⁴⁶

PAHs: Studied for decades, PAHs have also been found to contribute to mutagenic and carcinogenic activity. Processed meat products contain precursors to PAHs, creating PAHs when animal fat drips onto a heated surface and burns.⁴⁷ Processed meat products are thereby of concern due to the routine use of high temperature cooking methods to prepare such foods.⁴⁸ Through a process of metabolic activation by cytochrome P450 enzymes and/or peroxidases, PAHs become reactive intermediates with carcinogenic potential.⁴⁹ PAH exposure results in genotoxic markers such as DNA adducts, chromosome aberrations, sister chromatid exchanges, *ras* oncogene over expression, and impacts on cellular pathways.⁵⁰ PAHs generally exist in complex mixtures, making it difficult to pinpoint the relative contribution of any individual PAH to carcinogenic effects.

One of the most prevalent and readily identifiable carcinogenic PAHs is BAP.⁵¹ Since the 1930s, BAP has been studied for its carcinogenic effect.⁵² BAP was listed as a known carcinogen by the State of California in 1987 and was upgraded to this status by the IARC in 2007.⁵³ HHS has

⁴² See IARC. *Some Naturally Occurring Substances: Food Items and Constituents, Heterocyclic Aromatic Amines and Mycotoxins*, Vol. 56 at 11.

⁴³ See Sinha, R. et al. (2005). *Meat, Meat Cooking Methods and Preservation, and Risk for Colorectal Adenoma*. *CANCER RES.* 65(17): 8034-8042.

⁴⁴ OEHHHA (2015). *Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*. http://oehha.ca.gov/prop65/prop65_list/files/P65single082515.pdf (last visited Oct.26, 2015).

⁴⁵ IARC (2007). *Agents Reviewed by the IARC Monographs, Vols. 1-98, 4*.

⁴⁶ Food Standards Australia New Zealand (2005). *Scientific Assessment of the Public Health and Safety of Poultry Meat in Australia*. 1-228, 172. Gooderham, N.J. et al. (1996). *Heterocyclic amines: evaluation of their role in diet associated with human cancer*. *BR. J. CLIN. PHARMACOL.* 42: 91-98, 91.

⁴⁷ Sinha, R. et al. (2005). *Dietary Benzo[a]Pyrene Intake and Risk of Colorectal Adenoma*. *CANCER EPIDEMIOL. BIOMARKERS PREV.* 14(8): 2030-2034, 2030.

⁴⁸ See IARC: Polycyclic Aromatic Hydrocarbons, § 5.4, August 2006.

⁴⁹ Melendez-Colon, V.J., Luch, A., Seidel, A. and Barid, W.M. (1999). *Cancer initiation by polycyclic aromatic hydrocarbons results from formation of stable DNA adducts rather than apurinic sites*. *CARCINOGENESIS* 20(10): 1885-1891, 1885.

⁵⁰ Ding et al. (2006). *Effects of Polycyclic Aromatic Hydrocarbons (PAHs) on Vascular Endothelial Growth Factor Induction through Phosphatidylinositol 3-Kinase/AP-1-dependent HIF-1 α -Independent Pathway*. *J. BIOL. CHEM.* 281(14): 9093-9100, 9099.

⁵¹ See IARC (2007). *Overall Evaluations of Carcinogenicity to Humans*.

⁵² Rubin, H. (2001). *Synergistic mechanisms in carcinogenesis by polycyclic aromatic hydrocarbons and by tobacco smoke: a biohistorical perspective with updates*. *CARCINOGENESIS* 22(12): 1903-1930, 1903.

⁵³ IARC (2007). *Agents Reviewed by the IARC Monographs, Vols. 1-98, 4*; OEHHHA (2015). *Chemicals Known to the State to Cause Cancer or Reproductive Toxicity*. http://oehha.ca.gov/prop65/prop65_list/files/P65single082515.pdf (last visited Oct.26, 2015).

identified BAP and PAHs as substances reasonably anticipated to cause cancer.⁵⁴ Because there is no known safe level of exposure for BAP or other genotoxic PAHs, they should be avoided as much as possible.⁵⁵

C. Processed Meat and the Risk of Cardiovascular Disease

Cardiovascular disease (“CVD”) remains the number-one killer of Americans. Nearly a quarter of deaths from CVD are avoidable, and dietary intervention is a major factor for prevention.⁵⁶ The sodium and saturated fat content of processed meat products contribute to the risk of heart disease.

The 2009 NIH study of more than a half-million people concluded that the group that consumed the highest amount of processed meat was subject to an increased risk of death from cardiovascular disease.⁵⁷ The study based this conclusion, in part, on the consequential elevated blood pressure that is positively associated with higher consumption of processed meat.⁵⁸ By reducing the total consumption of processed meat from 22.6 grams per 1,000 calories to 1.6 grams per 1,000 calories, cardiovascular disease mortality could be reduced by 20 percent in women.⁵⁹ Thus, the NIH study supports reducing processed meat consumption to reduce the risk of cardiovascular disease mortality.

In the European Prospective Investigation into Cancer and Nutrition (“EPIC”), which followed 448,568 men and women, researchers found a strong correlation between consuming processed meat products and risk of dying from CVD. Those consuming more than 160 grams per day of processed meat products had a 30 percent increased risk of death from CVD, compared with those who consumed 10 to 20 grams per day.⁶⁰

Results from the Health Professionals Follow-up Study (“HPFS”) and the Nurses’ Health Study (“NHS”) indicate that eating just one serving of a processed or unprocessed red meat product a day increases risk of death from diseases such as cancer and heart disease. These studies tracked the diets of 37,698 men from the HPFS and 83,644 women from the NHS for up to 28 years. All participants were free of CVD and cancer at the start of the study. Risk of death increased by 20 percent for those consuming processed meat products, and for those who had one serving of a red meat product a day, the mortality rate increased by 13 percent.⁶¹

⁵⁴ HHS, Public Health Service, National Toxicology Program (2005). *Report on Carcinogens, Eleventh Edition*.

⁵⁵ *Id.* at 169.

⁵⁶ Centers for Disease Control and Prevention. *Avoidable deaths from heart disease, stroke, and hypertensive disease: US 2001-2010*. MMWR MORB MORTAL WKLY REP. 2013;62:721-727.

⁵⁷ Sinha, R. et al. (2009) at 565.

⁵⁸ *Id.* at 569.

⁵⁹ *Id.* at 567.

⁶⁰ Rohrmann S, Overvad K, Bueno-de-Mesquita HB, et al. *Meat products consumption and mortality-results from the European Prospective Investigation into Cancer and Nutrition*. BMC MEDICINE.2013;11:63-75

⁶¹ Pan A, Sun Q, Bernstein AM, et al. *Red meat products consumption and mortality: results from 2 prospective cohort studies*. ARCH INTERN MED.2012;172:555-563.

V. CONCLUSION

In passing the National School Lunch Act, Congress mandated the dual goals of supporting “the health and well-being of the Nation’s children” and “encourag[ing] the domestic consumption of nutritious agricultural commodities.” Unfortunately, USDA has sacrificed the first goal in its pursuit of the second. USDA compromises the health of the nation’s children by ignoring convincing and accepted scientific evidence on the harmful effects of consuming processed meat and poultry. The Physicians Committee therefore requests that USDA comply with the National School Lunch Act and protect the health and well-being of the nation’s children by eliminating the availability of processed meat through the Child Nutrition Commodity Programs, including the National School Lunch Program.

In denying the Physicians Committee’s prior petition, USDA described the necessary conditions for removing processed meat from schools. Those conditions—the determinations of leading national and international bodies regarding the risks posed—now have been met many times over. In the face of incontrovertible evidence that children are put at risk of cancer and eventual death as a result of continuing exposure to processed meat, action is clearly and strongly warranted.

USDA regulations require that this petition be given “prompt consideration.”⁶² The Physicians Committee requests a substantive response within 180 calendar days.⁶³

Respectfully submitted,



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⁶² 7 C.F.R. § 1.28.

⁶³ See 42 U.S.C. § 7604(a).