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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

THE AMERICAN BEVERAGE ASSOCIATION, CALIFORNIA RETAILERS ASSOCIATION, CALIFORNIA STATE OUTDOOR ADVERTISING ASSOCIATION, Plaintiffs, vs. THE CITY AND COUNTY OF SAN FRANCISCO, Defendant.	Case No. 3:15-cv-03415 EMC **BRIEF OF *AMICI CURIAE* AMERICAN HEART ASSOCIATION, AMERICAN ACADEMY OF PEDIATRICS, ASSOCIATION OF ASIAN PACIFIC COMMUNITY HEALTH ORGANIZATIONS, CALIFORNIA ACADEMY OF FAMILY PHYSICIANS, CALIFORNIA CENTER FOR PUBLIC HEALTH ADVOCACY. CALIFORNIA CHAPTER OF THE AMERICAN ASSOCIATION OF CLINICAL ENDOCRINOLOGISTS, CALIFORNIA MEDICAL ASSOCIATION, CENTER FOR SCIENCE IN THE PUBLIC INTEREST, CHANGELAB SOLUTIONS, DIABETES COALITION OF CALIFORNIA, NATIONAL ASSOCIATION OF CHRONIC DISEASE DIRECTORS, NATIONAL ASSOCIATION FOR COUNTY AND CITY HEALTH OFFICIALS, NATIONAL ASSOCIATION OF LOCAL BOARDS OF HEALTH, NETWORK OF ETHNIC PHYSICIAN ORGANIZATIONS. PREVENTION INSTITUTE, PUBLIC HEALTH INSTITUTE, PUBLIC HEALTH**

LAW CENTER, SAN FRANCISCO BAY AREA PHYSICIANS FOR SOCIAL RESPONSIBILITY, SAN FRANCISCO COMMUNITY CLINIC CONSORTIUM, SAN FRANCISCO MEDICAL SOCIETY, STRATEGIC ALLIANCE FOR HEALTHY FOOD AND ACTIVITY, AND THE FOOD TRUST

Date: April 7, 2016
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TABLE OF AUTHORITIES

CASES

Am. Meat Inst. v. USDA,
760 F.3d 18 (D.C. Cir. 2014) 24

Beeman v. Anthem Prescription Mgmt., LLC,
315 P.3d 71 (Cal. 2013) 24

Bolger v. Youngs Drug Products Corp.,
463 U.S. 60 (1983) 24

Conn. Bar Ass'n v. United States,
620 F.3d 81 (2d Cir. 2010) 24

CTIA v. City of Berkeley,
2016 WL 324283 (N.D. Cal. Jan. 27, 2016) 22

Disc. Tobacco City & Lottery, Inc. v. United States,
674 F.3d 509 (6th Cir. 2012) 20, 24

Entm't Software Ass'n v. Blagojevich,
469 F.3d 641 (7th Cir. 2006) 20

Greater Baltimore Ctr. for Pregnancy Concerns, Inc. v. Mayor & City Council of Baltimore,
721 F.3d 264 (4th Cir. 2013) 24

In re R.M.J.,
455 U.S. 191 (1982) 24

Nat'l Elec. Mfrs. Ass'n v. Sorrell,
272 F.3d 104 (2d Cir. 2001) 20

Peel v. Att'y Registration & Disciplinary Comm'n of Illinois,
496 U.S. 91 (1990) 24

Pharm. Care Mgmt. Ass'n v. Rowe,
429 F.3d 294 (1st Cir. 2005) 24

Rubin v. Coors Brewing Co.,
514 U.S. 476 (1995) 25

Safelite Grp., Inc. v. Jepsen,
764 F.3d 258 (2d Cir. 2014) 24

Schweiker v. Wilson,
450 U.S. 221 (1981) 24

United States v. Marzzarella,
614 F.3d 85 (3d Cir. 2010) 24

Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio,
471 U.S. 626 (1985) 1, 20, 23, 24, 25

STUDIES, ARTICLES & OTHER AUTHORITIES

American Academy of Pediatrics, Committee on Sch. Health, *Soft Drinks in Schools*, 113 PEDIATRICS (Jan. 2004) 19

American Diabetes Ass'n, *Diabetes Myths* 18

American Dental Ass'n, Mouth Healthy, *Diet and Dental Health* 19

American Dental Ass'n, Mouth Healthy, *Nutrition* 19

Astrup, Arne, *Yogurt and Dairy Product Consumption to Prevent Cardiometabolic Diseases*, 99 AM. J. CLIN. NUTR.1235S (2014) 21

Barlow, Sarah, *Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity*, 120 PEDIATRICS S164–S192 (2007) 19

Beaglehole, Rob, *Dentists and Sugary Drinks: A Call to Action*, 146 J. AM. DENTAL ASS'N 73 ..... 14, 16

Bes-Rastrollo, Maira et al., *Financial Conflicts of Interest and Reporting Bias Regarding the Association between Sugar-Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews*, 10 PLOS MED. 1 (2013) 15

Burros, Marian, *Group's Pursuit of Cash Draws Fire*, MILWAUKEE J. SENTINEL (Dec. 6, 1995) 16

Centers for Disease Control & Prevention, *Beverage Consumption Among H.S. Students* 60 Morb. & Mortal. Weekly Rep. 778, (June 17, 2011) 21

Centers for Disease Control & Prevention, *Basics About Childhood Obesity* (Apr. 27, 2012) 3

Centers for Disease Control & Prevention, *Recommended Community Strategies and Measurements to Prevent Obesity in the U.S.* (July 24, 2009) 18

Centers for Disease Control & Prevention, NAT'L DIABETES STATISTICS REP., 2014 ..... 3, 4

Centers for Disease Control & Prevention, *Oral and Dental Health*, FASTSTATS 4

de Koning, Lawrence et al., *Sugar Sweetened and Artificially Sweetened Beverage Consumption and Risk of Type 2 Diabetes in Men*, 93 AM. J. CLIN. NUTR. 1321 (2011) 11

DellaValle, Diane et al., *Does the Consumption of Caloric and Non-Caloric Beverages With a Meal Affect Energy Intake?* 44 APPETITE 187 (2005) 8

Dennis, Brady, *FDA Moves to Ban Trans Fat From US Food Supply*, WASH. POST (June 16, 2015) 16

Dietary Guidelines for Americans Committee Report (2015) ..... *passim*

DiMeglio, Doreen & Richard Mattes, *Liquid Versus Solid Carbohydrate: Effects on Food Intake and Body Weight*,
24 INT'L J. OBESITY & RELATED METABOLIC DISORDERS 794 (2000) 8

Farley, Tom, *Resurrect the Sugary Soda Tax*,
N.Y. DAILY NEWS (Oct. 18, 2015) 21

Farley, Tom, SAVING GOTHAM (2015) 21, 22

Federal TRADE COMMISSION, *Marketing Food to Children and Adolescents: A Review of Industry Expenditures, Activities, and Self-Regulation* (2008) 5

Finkelstein, Eric et al, *Annual Medical Spending Attributable to Obesity*,
28 HEALTH AFF. w822 (2009) 2

Flood-Obbagy, Julie & Barbara Rolls, *The Effect of Fruit in Different Forms on Energy Intake and Satiety at a Meal*,
52 APPETITE 416 (2009) 8

Flegal, Katherine, *Prevalence of Obesity and Trends in the Distribution of Body Mass Index Among US Adults, 1999-2010*,
307 J. AM. MED. ASS'N 491 (2012) 2

Food and Drug Administration, *Food Labeling: Revision of the Nutrition and Supplement Facts Labels*, 80 FEDERAL REGISTER 44302 (Jul. 27. 2015) 6

Harris, Jennifer et al., *Sugary Drink FACTS 2014: Some Progress but Much Room to Improve*,
RUDD CTR. FOR FOOD POLICY AND OBESITY (2014) 5

Hu, Frank, *Resolved: There Is Sufficient Scientific Evidence That Decreasing Sugar-Sweetened Beverage Consumption Will Reduce the Prevalence of Obesity and Obesity-Related Diseases*,
14 OBES. REV. 606, 606 (2013) ..... *passim*

Inst. of Medicine, *Local Government Actions to Prevent Childhood Obesity* (2009) 19

Kahn, Richard & David Sievenpiper, *Dietary Sugar and Body Weight: Have We Reached a Crisis in the Epidemic of Obesity and Diabetes?*
37 DIABETES CARE 957 (2014) 17

Kaiser, Kathryn et al., *Will Reducing Sugar-Sweetened Beverage Consumption Reduce Obesity? Evidence Supporting Conjecture Is Strong, But Evidence When Testing Effect Is Weak*,
14 OBES. REV. 620 (2013) 9

Katan, Martijn, *Comment on Kahn & Sievenpiper, Dietary Sugar and Body Weight*,
37 DIAB. CARE e188 (2014) 17

Kearns, Cristin et al., *Sugar Industry Influence on the Scientific Agenda of the National Institute of Dental Research's 1971 National Caries Program*,
12 PLOS MED. e1001798 (2015) 14, 16, 23

Khanolkar, Manish et al.,
The Diabetic Foot, 101 QJM 685 (2008) 4

Koseff, Alexei, *California Voters Favor Taxes, Labels for Sugary Drinks*, SAC. BEE (Feb. 3, 2016) 25

Lesser, Lenard et al., *Relationship Between Funding Source and Conclusion Among Nutrition-Related Scientific Articles*, 4 (1) PLOS MED. 41, 44 (2007) 15

Lipton, Eric, *Rival Industries Sweet-Talk the Public*, N.Y. TIMES (Feb. 11, 2014) 17

Lustig, Robert et al., *Isocaloric Fructose Restriction and Metabolic Improvement in Children with Obesity and Metabolic Syndrome*, 24 OBESITY 453 (2015) 12

Maersk, Maria et al., *Sucrose-Sweetened Beverages Increase Fat Storage in the Liver, Muscle, and Visceral Fat Depot*, 95 AM J. CLIN. NUTR. 283 (2012) 12

Malik, Vasanti & Frank Hu, *Fructose and Cardiometabolic Health: What the Evidence From Sugar-Sweetened Beverages Tells Us*, 66 J. AM. COLL. CARDIOL. 1615 (2015) 8, 12

Malik, Vasanti et al., *Intake of Sugar-Sweetened Beverages and Weight Gain: A Systematic Review*, 84 AM. J. CLIN. NUTR. 274 (2006) 7

Malik, Vasanti et al., *Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2* Diabetes*: A Meta-Analysis*, 33 DIABETES CARE 2477 (2010) 8, 11, 12

Malik, Vasanti et al., *Sugar-Sweetened Beverages and Weight Gain in Children and Adults: A Systematic Review and Meta-analysis*, 98 AM. J. CLIN. NUTR. 1084 (2013) 7, 9

Mattes, Richard, et al, *Nutritively Sweetened Beverage Consumption and Body Weight: A Systematic Review and Meta-Analysis of Randomized Experiments*, 12 OBES. REV. 346 (2011) 10

Mourao, Denise, et al., *Effects of Food Form on Appetite and Energy Intake in Lean and Obese Young Adults*, 31 INT'L J. OBESITY 1688 (2007) 8

Moynihan, Paula & S.A.M. Kelly, *Effect on Caries of Restricting Sugars Intake: Systematic Review to Update WHO Guidelines*, 93 J. DENT. RES. 8 (2014) 13, 14

Nat'l Diabetes Statistics Clearinghouse, National Diabetes Statistics (2011) 3, 4

O'Connor, Anahad, *Coca-Cola Funds Scientists Who Shift Blame for Obesity Away From Bad Diets*, N.Y. TIMES (Aug. 9, 2015) 15, 17

O'Connor, Anahad, *Coke Spends Lavishly on Pediatricians and Dietitians*, N.Y. TIMES (Sept. 28, 2015) 15, 19

O'Connor, Anahad, *Research Group Funded by Coca-Cola to Disband*, N.Y. TIMES (Dec. 1, 2015) 15

Ogden, Cynthia & Margaret Carroll, *Prevalence of Obesity Among Children and Adolescents: United States*, NCHS Health E-Stat (June 2010) 3

Ogden, Cynthia et al., *Consumption of Sugar Drinks in the United States*, 2005-2008, Nat. Ctr. Health Stat., NCHS Data Brief No. 71 (Aug. 2011) 22

Ogden, Cynthia et al., *Prevalence of Childhood and Adult Obesity in the United States, 2011-2012*, 311 JAMA 806 (2014) 3

Olshansky, S. Jay et al, *A Potential Decline in Life Expectancy in the U.S. in the 21st Century*, 352 NEJM 1138 (2005) 3

Pan, An et al., *Plain-Water Intake and Risk of Type 2 Diabetes in Young and Middle-Aged Women*, 95 AM. J. CLIN. NUTR. 1454 (2012) 11

Rampton, Sheldon & John Stauber, *Trust Us, We're Experts!: How Industry Manipulates Science and Gambles with Your Future* (2002) 16

Roberto, Christina et al., *The Influence of Sugar-Sweetened Beverage Health Warning Labels on Parents' Choices*, 137(2) PEDIATRICS (Feb. 2016) 2

Santora, Marc, *In Diabetes Fight, Raising Cash and Keeping Trust*, N.Y. TIMES (Nov. 25, 2006) 17

Stanhope, Kimber & Peter Havel, *Fructose Consumption: Potential Mechanisms for Its Effects to Increase Visceral Adiposity and Induce Dyslipidemia and Insulin Resistance*, 19 Curr. Opin. Lipidol. 16 (2008) 12

Stanhope, Kimber, *Sugar Consumption, Metabolic Disease, and Obesity*, 53 CRIT. REV. CLIN. LAB. SCI. 52 (2016) 17

Strasser, Christian et al., *Heuristic Reasoning*, 16 STUDIES IN APPLIED PHILOSOPHY, EPISTEMOLOGY & RATIONAL ETHICS 113 (2015) 22

Scientific Panel, *SB 203: Warning Labels on Sugary Drinks* 23

Sheiham, Aubrey & W. Phillip James, *A New Understanding of the Relationship Between Sugars, Dental Caries and Fluoride Use: Implications for Limits on Sugars Consumption*, 17 PUB. HEALTH NUTR. 2176 ..... 4, 12, 13

Sheiham, Aubrey & W. Phillip James, *Diet and Dental Caries: The Pivotal Role of Free Sugars Reemphasized*, 94 J. DENT. RES. 1341 (2015) 4, 12, 13, 14, 15, 17

Te Morenga, Lisa et al., *Dietary Sugars and Body Weight: Systematic Review and Meta-Analyses of Randomised Controlled Trials and Cohort Studies*, 346 BMJ e7492, 5, 7 (2012) 6, 9, 21

U.S. Dep'ts of Agriculture and Health & Human Services, DIETARY GUIDELINES FOR AMERICANS 2015-2020 ..... 2, 5

Wood, David, *U.S. Wounded In Iraq, Afghanistan*, HUFF. POST (Nov. 7, 2012) 3

Woodward-Lopez, Gail, et al., *To What Extent Have Sweetened Beverages Contributed to the Obesity Epidemic?* 14 PUB. HEALTH NUTR. 499 (2010) 6

World Health Organization, *Guideline: Sugars Intake for Adults and Children* (2015) 18

STATEMENTS OF INTEREST OF *AMICI CURIAE*[1]

1. The **American Heart Association** is a voluntary health organization that, since 1924, has been devoted to saving people from heart disease and stroke – the two leading causes of death in the world. It teams with millions of volunteers to fund innovative research, fight for stronger public health policies, and provide lifesaving tools and information to prevent and treat these diseases. The Dallas-based association with local offices in all 50 states, as well as in Washington DC and Puerto Rico, is the nation's oldest and largest voluntary organization dedicated to fighting heart disease and stroke.

2. The **American Academy of Pediatrics**, California (AAP-CA) is a legally incorporated nonprofit member association, comprised of the four AAP California chapters statewide representing approximately 5,000 board-certified primary care and subspecialty pediatricians. The mission of the AAP-CA is to promote the health and well-being of all children and youth living in California. One of the organization's top goals is the prevention of childhood obesity; pediatricians see first-hand in their practices the devastating effects obesity can have on children, too often resulting in serious and life-long health problems, and even reducing life expectancy. Type 2 diabetes is increasingly being diagnosed in youth, and now accounts for 20% to 50% of new-onset diabetes case patients, disproportionately affecting minority race/ethnic groups. AAP-CA is active in activities and advocacy to educate patients, families and the public regarding the growing evidence that links the prevalent consumption of sugar sweetened beverages to the devastating obesity epidemic in children. Further, pediatricians are committed to supporting strategies that reduce the incidence of dental caries (cavities), the most common infectious disease of early childhood, which has been strongly linked to sugar sweetened beverage consumption.

3. The **Association of Asian Pacific Community Health Organizations** ("AAPCHO") is a national association of 35 community health organizations dedicated to

[1] None of the *amici curiae* has a publicly held parent corporation and no publicly held corporation owns 10% or more of the stock in any *amicus curiae*. This Memorandum of Law is filed pursuant to the Court's Order on the Joint Administrative Motion to Permit Filing of Amicus Briefs, January 22, 2016.

promoting advocacy, collaboration and leadership that improves the health status and access of Asian Americans, Native Hawaiians and Pacific Islanders (AA&NHPIs) in the United States. For nearly 30 years, AAPCHO's work has helped AA&NHPI-serving health centers and other health care providers ensure that primary care services are accessible, high quality, and culturally and linguistically appropriate for these and other vulnerable populations disproportionately impacted by chronic diseases including obesity and type 2 diabetes. With our members and partners, we have helped develop and implement policy, systems and environmental (PSE) solutions designed to combat these diseases in innovative ways, such as growing community gardens and providing health education to promote healthy eating, increase access to nutritious food and reduce consumption of unhealthy foods, including beverages that include excessive amounts of sugar.

4. The **California Academy of Family Physicians** (CAFP) has championed the cause of family physicians and their patients since 1948. CAFP is critically important to primary care. With a strong collective voice of more than 9,000 family physician, family medicine resident and medical student members, the CAFP is the largest primary care medical society in California and the largest chapter of the American Academy of Family Physicians. CAFP works to solve family physicians' professional challenges and health policy concerns, including the effort to ensure patients are aware of the adverse health effects of consuming sugar-sweetened beverages. Through advocacy and education, CAFP fights to expand access to high quality and cost-effective patient care for California.

5. The **California Center for Public Health Advocacy** is an independent, nonpartisan, nonprofit organization at the forefront of solving the obesity and diabetes epidemics by advocating for groundbreaking policies that build a healthier California. CCPHA was founded in 1999, by the Northern and Southern California Public Health Associations, to mobilize communities and promote the establishment of effective state and local policy solutions to address the leading causes of preventable illness and premature death in California: heart disease, cancer, stroke, and diabetes. CCPHA was the sponsor of several of California's groundbreaking public health nutrition laws, including rigorous school nutrition standards and nutrition information posting requirements on menus in chain restaurants. CCPHA was the lead sponsor of

two attempted state bills to require health warnings on sugary drinks. Its current work centers on preventing and treating Type 2 diabetes, with one of the specific aims to decrease consumption of soda and other sugary drinks and to increase the consumption of water and other healthy beverages.

6. The **California Chapter of the American Association of Clinical Endocrinologists** (AACE) represents over 500 clinical endocrinologists across the state of California. AACE is the largest association of clinical endocrinologists, representing over 6,500 endocrinologists in the United States and in 90 countries. The great majority of AACE members are certified in Endocrinology and Metabolism and concentrate on the treatment of patients with diabetes, thyroid disorders, obesity, osteoporosis and other endocrine and metabolic disorders. Our organization is also committed to advocacy for our patients and their family members. As an organization, we feel strongly that this law warning about the health effects of sugar-sweetened beverages will have a positive impact on our communities.

7. The **California Medical Association (CMA)** is a not-for-profit, incorporated professional association for physicians with more than 41,000 members. CMA physician members practice medicine in all specialties and modes of practice throughout California. For more than 150 years, CMA has promoted the science and art of medicine, the care and well-being of patients, the protection of public health, and the betterment of the medical profession. CMA policy supports the adoption of sugar-sweetened beverage regulations that require warning labels on product advertising and restrict ads on public property.

8. The **Center for Science in the Public Interest** (CSPI) is a leading national, non-profit advocacy organization for nutrition, health, food safety, and scientific integrity. The organization has worked to highlight and address the health risks of sugar-sweetened beverages for decades. CSPI pushed to reduce access to sodas in schools and other settings, and filed a citizen petition in 2013 questioning whether current levels of added sugars in foods and beverages should be considered "generally recognized as safe" under federal law. CSPI also supports the San Francisco law requiring sugar-sweetened beverage advertisements to include a warning notice.

9. **ChangeLab Solutions** is a national nonprofit organization that creates innovative laws and policies to ensure everyday health for all, whether that is providing access to affordable, healthy food and beverages, creating safe opportunities for physical activity, or ensuring the freedom to enjoy smoke free air and clean water. Our solutions address all aspects of a just, vital and thriving community, such as food, housing, childcare, schools, transportation, public safety, jobs, and the environment. ChangeLab Solutions creates and helps implement legal and policy solutions designed to increase access to nutritious food while reducing consumption of unhealthy foods, including sugar-sweetened beverages and other foods that include large amounts of added sugars.

10. The **Diabetes Coalition of California** (DCC) is an independent, volunteer organization consisting of individuals and agencies dedicated to the prevention, recognition, and reduction of the adverse personal and public impact of diabetes in the state's diverse communities. The DCC is comprised of representatives from the general public, local health departments, universities, companies, and a variety of community-based, voluntary, health and professional organizations. The specific purpose of this organization is to prevent diabetes and its complications in California's diverse communities. The DCC supports evidence-based methods to prevent and manage diabetes, including support of healthy lifestyles and the consumption of nutritious foods and the reduction of high calorie foods and beverages, including those with excessive amounts of sugar.

11. The **National Association of Chronic Disease Directors** ("NACDD") is a non-profit public health organization committed to serving the chronic disease directors of each state and U.S. jurisdiction. Founded in 1988, NACDD connects more than 6,000 chronic disease practitioners to advocate for preventive policies and programs, encourage knowledge sharing, and develop partnerships for health promotion. NACDD agrees with the position taken by the World Health Organization, American Heart Association, and other leading medical groups, and endorses limiting sugar intake, including sugar-sweetened beverages.

12. The **National Association for County and City Health Officials** ("NACCHO") is the voice of the 2800 local health departments across the county. NACCHO helps local health

departments develop policies and create environments to ensure that everyone, no matter where they live, has access to healthy affordable foods and beverages.

13. The **National Association of Local Boards of Health** ("NALBOH") informs, guides, and is the national voice for local boards of health. Uniquely positioned to deliver technical expertise in governance, leadership and board development, NALBOH is committed to strengthen good governance where public health begins – at the local level. For over 20 years, NALBOH has been engaged in establishing this significant voice for local boards of health on matters of national public health policy. In line with its commitment to public health, NALBOH supports healthy food and beverage policies, including the reduction of overconsumption of sugar-sweetened beverages.

14. The **Network of Ethnic Physician Organizations** (NEPO) is a coalition of more than 50 ethnic physician organizations in California. NEPO and its physicians work to reduce health disparities, improve access to health care, and advocates for public health issues that affect their communities.

15. **Prevention Institute** is a national nonprofit dedicated to advancing community health and well-being by building momentum for effective primary prevention and health equity. Prevention Institute brings cutting-edge research, practice, and analysis to today's pressing health and safety concerns. Included among its focus areas, Prevention Institute works to advance strategies and policies that increase access to healthful food and limit the impact of harmful marketing of unhealthy food, including sugar-sweetened beverages.

16. The **Public Health Institute** (PHI) is a nonprofit organization working across the globe to promote health, well-being and quality of life for all people. PHI programs, including Cultiva La Salud, Project LEAN and Roots of Change, work to ensure that all Californians have access to healthier, affordable foods and beverages and to reduce consumption of unhealthy foods and beverages. The knowledge and experience of our programs and work in California and overseas has given us a deep understanding of the devastation caused by the obesity and diabetes epidemic that is wreaking havoc on the public's health and healthcare costs and the incontrovertible link to consumption of sugar-sweetened beverages. Furthermore, PHI's Alcohol

Research Group pioneered research on the effectiveness of alcoholic beverage warning labels, which like tobacco warnings have helped to raise awareness and inform consumers of product related risks.

17. The **Public Health Law Center** uses the law to improve America's health. A public interest, nonprofit affiliate of the Mitchell Hamline School of Law in Saint Paul, Minnesota, the Center is home to the nation's largest team of attorneys and law students helping community leaders reduce tobacco use, improve the nation's diet, and encourage physical activity. The Center has prepared publications on policy options for regulating sugar drinks, worked to remove sugar drinks from hospitals, provided technical assistance and training to communities considering taxation of sugar drinks, and studied the ineffectiveness of self-regulation of food and beverage advertising. The Center has filed more than forty briefs as amicus curiae in the highest courts of the land, including ten briefs addressing the regulation of commercial speech harmful to public health.

18. **San Francisco Bay Area Physicians for Social Responsibility** (SF Bay Area PSR), representing over 2,500 health professionals and supporters, is the local chapter of Physicians for Social Responsibility (PSR), a non-profit advocacy and educational organization that, guided by the expertise of medicine and public health, works to protect human life from the gravest threats to health and survival. A key part of our ongoing programmatic work includes promoting ecologically sound health care by working with healthcare professionals and institutions to promote "green" energy choices, safer chemicals, and healthy food produced in an environmentally and socially responsible way. As part of our "healthy food" work, we continue to support the implementation of public policy solutions created to increase access to nutritious food while reducing consumption of unhealthy foods, including beverages that include excessive amounts of sugar, and which have been strongly implicated in the development of childhood diabetes, obesity and tooth decay, with associated serious and negative lifelong health impacts.

19. The **San Francisco Community Clinic Consortium** develops innovative programs and advocates for policies that increase access to quality community-based primary health care. We work to ensure that people of all income levels have access to health care that is:

comprehensive, coordinated, and efficient and culturally and linguistically appropriate. Focused on patient needs The SFCCC provides primary care services to more than 10% of San Francisco's population. We work with providers citywide to coordinate primary care with specialists, hospitals, and other services. We serve overlooked populations such as homeless San Franciscans, immigrant communities and seniors. Many of our partner clinics have a significant number of patients with diabetes and see first hand the impact on low income communities of the consumption of sugar sweetened beverages. We support evidenced based practices to reduce sugary beverage consumption.

20. The **San Francisco Medical Society** (SFMS) is the professional association for physicians in San Francisco, and has been active since 1868, working for the betterment of health for everyone in our city. With more than 1,800 members—including practicing physicians, residents, and medical students—SFMS champions quality health care and innovation for our patients and community and serves the professional needs of all San Francisco physicians. We have spearheaded many community health issues in San Francisco including the co-sponsorship of Hep B Free, anti-tobacco legislation and education, formation and continuation of the Healthy San Francisco program, advocacy on reproductive and end-of-life issues, in addition to advocacy for the California Soda Warning Label Bill (SB 203) and the 2014 San Francisco soda tax initiative. The local ordinance for warnings on sugary drink ads is thus very much in support of our goals of a healthier San Francisco.

21. The **Strategic Alliance for Healthy Food and Activity** is a network of organizations and individuals dedicated to advancing healthier food and physical activity environments across California. The Strategic Alliance focuses on supporting government policies and organizational practices that improve Californians' opportunities to engage in healthy eating and active living. Since 2001, the Strategic Alliance has been at the forefront of developing strategies, tools, and policies that have helped make California a leader in promoting health, equity, and well-being. The Strategic Alliance has consistently prioritized policy approaches that help to reduce consumption of unhealthy foods, including sugar-sweetened beverages.

//

22. **The Food Trust** is a national nonprofit organization working to ensure that everyone has access to affordable, nutritious food and information to make healthy decisions. Working with neighborhoods, schools, grocers, farmers and policymakers since 1992, we have developed a comprehensive approach to improved food access that combines nutrition education and greater availability of affordable, healthy food and beverage options.

INTRODUCTION

Faced with triple epidemics of chronic disease – obesity, type 2 diabetes, and dental caries – San Francisco has taken a measured step to provide information to its residents about a significant driver of each of those conditions: sugary drinks. The warning labels required by Ordinance No. 100-15 state a simple truth: Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay. That concise statement provides San Franciscans immediate and accurate information about choices they can make to protect their health, information supported by extensive scientific evidence.

The First Amendment poses no obstacle to the warning label ordinance. To the contrary, "[b]ecause the extension of First Amendment protection to commercial speech" – like advertising – "is justified principally by the value to consumers of the information such speech provides," the interest of the American Beverage Association (ABA) and other plaintiffs "in *not* providing any particular factual information in [their] advertising is minimal." *Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio*, 471 U.S. 626, 651 (1985). That minimal interest must be placed against the acute interest that San Franciscans have in being informed about the detrimental effects of beverages that form an unhealthily large part of their diet – especially the City's African-American and Latino residents, who consume greater amounts of sugar-sweetened beverages (SSBs) and suffer in greater proportion from all three chronic diseases addressed by the Ordinance.

In order to establish that the Ordinance is subject to more stringent First Amendment review, the ABA must show that the statement in the warning label is not "factual and uncontroversial." *Zauderer*, 471 U.S. at 651. But that is an exceedingly difficult thing to do in this case. There is no question that the statement is "factual": it sets forth facts – things that can be proved or disproved – rather than opinions. And the statement rests on a foundation of "compelling"[1] scientific evidence, making it uncontroversial. In the words of the 2015 Dietary Guidelines for Americans Committee (DGAC), the body that develops the "cornerstone of Federal

[1] Frank Hu, *Resolved: There Is Sufficient Scientific Evidence That Decreasing Sugar-Sweetened Beverage Consumption Will Reduce the Prevalence of Obesity and Obesity-Related Diseases*, 14 OBESITY REVIEWS 606, 606 (2013), *at* https://www.sfdph.org/dph/files/hc/HCCommPublHlth/Agendas/2013/2013/December/review%20of%20evidence%20ssb.pdf

nutrition policy"[2] (the Dietary Guidelines for Americans): "Obesity, type 2 diabetes, … and dental caries are major public health concerns. Added sugars intake negatively impacts all of these conditions, and strong evidence supports reducing added sugars intake to reduce health risks."[3] That is a view endorsed by every pertinent agency of the federal government and a constellation of prominent local, national and international public health organizations.

Because the warning label is factual and uncontroversial, the Ordinance must be reviewed under a lenient standard. It readily survives that review.

I. SAN FRANCISCO HAS RESPONDED APPROPRIATELY TO A PUBLIC HEALTH CRISIS.

San Francisco, like the United States and indeed much of the world, is afflicted by epidemics of chronic disease. The harms of obesity and type 2 diabetes may be the gravest public health issue facing the City. Tooth decay remains the most widespread chronic disease among children and is even more pervasive in adults. The City has determined that all three epidemics are fostered in part by the consumption of SSBs, and that SSB consumption is fueled in part by soda company advertising, targeted in particular at the populations suffering most from these diseases. The Ordinance is a measured, sensible, and effective[4] response.

A. The Warnings Address Three Widespread Conditions With Serious Consequences for Public Health.

The first health crisis addressed by the label is vast in scope. Healthcare costs attributable to obesity in the United States exceed $147 billion every year.[5] More than a third of adults in the United States – over 78 million people – are obese; another third are overweight.[6] Rates of obesity

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[2] USDA, DIETARY GUIDELINES 2015-2020, *at* http://www.cnpp.usda.gov/dietaryguidelines

[3] Scientific Report of the 2015 Dietary Guidelines Advisory Committee, Part D, Ch. 6: Cross-Cutting Topics, at 26, *at* http://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf

[4] See Christina Roberto et al., *The Influence of Sugar-Sweetened Beverage Health Warning Labels on Parents' Choices*, 137(2) PEDIATRICS (Feb. 2016) (showing parents are less likely to choose a sugary drink for their child if those drinks have health warning labels), *at* http://pediatrics.aappublications.org/content/pediatrics/early/2016/01/13/peds.2015-3185.full.pdf

[5] Eric Finkelstein et al, *Annual Medical Spending Attributable to Obesity*, 28 HEALTH AFF. w822 (2009), *at* http://content.healthaffairs.org/content/28/5/w822.full.pdf

[6] Katherine Flegal, *Prevalence of Obesity and Trends in the Distribution of Body Mass Index Among US Adults, 1999-2010*, 307 J. AM. MED. ASS'N 491 (2012), *at* http://www.foodpolitics.com/wp-content/uploads/ObesityRates_JAMA_12.pdf; Cynthia Ogden et al., *Prevalence of Obesity Among Adults and Youth: United States, 2011-14*, 219 NCHS DATA BRIEF (Nov. 2015), *at* http://www.cdc.gov/nchs/data/databriefs/db219.pdf

among young children and adolescents have more than tripled in the past thirty years.[7] More than a sixth of American youth are obese.[8] Obese children are more likely to have type 2 diabetes, asthma, and even early signs of heart disease; they are also more likely to be obese adults and to have shortened life expectancy.[9] Indeed, today's young people may be the first generation in the history of the United States to live sicker and die younger than their parents' generation.[10]

In San Francisco, nearly half of all adults are now overweight or obese.[11] Of three- to four-year-olds enrolled in San Francisco Head Start, 18 percent – nearly 1 in 5 – are obese.[12] The second health crisis that the warning label addresses, type 2 diabetes (T2D), imposes direct medical costs of $176 billion a year nationally.[13] T2D – which was once known as "adult-onset diabetes" but now affects children as well – is epidemic. T2D now affects about one in every ten Americans; its prevalence in the United States has nearly doubled over the last thirty years.[14] The impact can be profound. To pick a single statistic: as of 2012, the total number of United States military personnel who had to undergo amputations as a result of the wars in Iraq and Afghanistan was 1,572.[15] The number of Americans with diabetes who had to undergo amputations in just the year 2006 was 65,700.[16] Even though new cases of diabetes have fallen in recent years, the projected impact of T2D in future decades is still sobering. An American today has an estimated 2 in 5 chance of developing diabetes in her lifetime; if she is Hispanic or African-American, the

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[7] Cynthia Ogden & Margaret Carroll, *Prevalence of Obesity Among Children and Adolescents: United States*, NCHS Health E-Stat (June 4, 2010), *at* http://www.cdc.gov/nchs/data/hestat/obesity_adult_07_08/obesity_adult_07_08.pdf

[8] Cynthia Ogden et al., *Prevalence of Childhood and Adult Obesity in the United States, 2011-2012*, 311 JAMA 806 (2014).

[9] CDC, *Basics About Childhood Obesity* (Apr. 27, 2012), *at* http://www.cdc.gov/obesity/childhood/basics.html

[10] S. Jay Olshansky et al, *A Potential Decline in Life Expectancy in the U.S. in the 21st Century*, 352 NEJM 1138, 1141 (2005), *at* http://www.nejm.org/doi/pdf/10.1056/NEJMsr043743

[11] San Francisco Health Improvement Partnership, *Adults Who Are Overweight or Obese* (Nov. 2015), *at* http://www.sfhip.org/modules.php?op=modload&name=NS-Indicator&file=indicator&iid=19192667

[12] S.F. Health Code § 4201, Findings.

[13] CDC, Nat'l DIABETES STATISTICS REP., 2014 (2014), *at* http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf

[14] *Id*.

[15] David Wood, *U.S. Wounded In Iraq, Afghanistan*, HUFF. POST (Nov. 7, 2012), *at* http://www.huffingtonpost.com/2012/11/07/iraq-afghanistan-amputees_n_2089911.html

[16] Nat'l Diabetes Statistics Clearinghouse, National Diabetes Statistics, Nat'l Inst. of Health (2011), *at* http://diabetes.niddk.nih.gov/dm/pubs/statistics/#Amputations

odds are 1 in 2.[17] In other words, almost half the people in this country face a future in which likely health outcomes include foot ulceration, with a lifetime risk up to 25 percent and the threat of amputation,[18] and diabetic retinopathy, with a prevalence rate near 30 percent and the threat of vision loss.[19]

The third health concern that the label addresses – dental caries – is the single most prevalent chronic disease in the United States, affecting 42% of children, 59% of adolescents, and 92% of adults. The rates of disease among Hispanics and African Americans are even higher.[20] Recent studies show that "despite the wide-scale availability of fluoride in water or toothpaste, … caries remains a major burden in older ages."[21] "[P]rogressive increases" in caries throughout life underscore "the importance of considering the adult burden of dental disease when assessing optimum intakes of sugars."[22] 27% of U.S. adults aged 20-44 have untreated dental caries,[23] which "must now be seen as a chronic, cumulative lifelong disease."[24]

B. Sugar-Sweetened Beverages Are Easily The Largest Source Of Added Sugars In The American Diet.

Sugar-sweetened beverages by themselves comprise almost 50% of all added sugar intake in the American diet[25]; they are "the largest source of calories and added sugars" in the U.S. diet of any food group.[26] Half of the population of the United States consumes SSBs on a given day, and "[c]onsumption is particularly high among African-Americans, Hispanics and low-income

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[17] CDC, *at* http://www.cdc.gov/diabetes/pdfs/newsroom/now-2-out-of-every-5-americans-expected-to-develop-type-2-diabetes-during-their-lifetime.pdf

[18] Manish Khanolkar et al., *The Diabetic Foot*, 101 QJM 685 (2008), *at* http://qjmed.oxfordjournals.org/content/101/9/685.full

[19] CDC, Nat'l Diabetes Statistics Rep., 2014, *supra* n.13.

[20] Nat'l INST. OF HEALTH, Dental Caries (Tooth Decay), *at* http://www.nidcr.nih.gov/datastatistics/finddatabytopic/dentalcaries

[21] Aubrey Sheiham & W. Phillip James, *Diet and Dental Caries: The Pivotal Role of Free Sugars Reemphasized*, 94 J. DENT. RES. 1341, 1341 (2015), *at* https://www.researchgate.net/profile/Aubrey_Sheiham/publication/280906772_Diet_and_Dental_Caries_The_Pivotal_Role_of_Free_Sugars_Reemphasized/links/55e570b208aecb1a7ccba1fd.pdf

[22] *Id*. at 4.

[23] CDC, *Oral and Dental Health*, FASTSTATS, http://www.cdc.gov/nchs/fastats/dental.htm.

[24] Aubrey Sheiham & W. Phillip James, *A New Understanding of the Relationship Between Sugars, Dental Caries and Fluoride Use: Implications for Limits on Sugars Consumption*, 17 PUB. HEALTH NUTR. 2176, 2176, *at* http://journals.cambridge.org/download.php?file=%2FPHN%2FPHN17_10%2FS136898001400113Xa.pdf&code=9e62a67d03921633d69390f92ddf4fcd

[25] USDA and HHS, 2015–2020 Dietary Guidelines for Americans (2015), Ch. 2, *Shifts Needed to Align with Healthy Eating Patterns*, Fig. 2-10 *at* http://health.gov/dietaryguidelines/2015/guidelines/chapter-2/a-closer-look-at-current-intakes-and-recommended-shifts/

[26] Hu, *Resolved*, *supra* n.1, at 606.

individuals –population groups with disproportionally high prevalence of obesity and obesity-related chronic diseases."[27]

C. Marketing Of SSBs Is Higher In Communities Where Obesity, Type 2 Diabetes, And Tooth Decay Are Disproportionately Prevalent.

One reason SSB consumption is more prevalent among communities of color is that beverage companies disproportionately market their products in those communities. Marketing campaigns specifically targeting African-American and Hispanic youth are prevalent[28] and successful: on English-language TV in 2013, African-American children and teens saw more than twice as many ads for sugary drinks and energy drinks compared with Caucasian children and teens.[29] Hispanic preschoolers and children saw 23% and 32% more Spanish-language TV ads for sugary drinks and energy shots in 2013 than in 2010, even as the number of ads seen by children overall declined. Hispanic youth were 93% more likely than other youth to visit beverage company websites, and African-American youth were 34% more likely to visit.[30]

African-Americans and Hispanics are, as noted, disproportionately affected by obesity, diabetes, and tooth decay.

II. THE ACCURACY OF THE REQUIRED WARNINGS IS SCIENTIFICALLY WELL ESTABLISHED.

The city has determined that sugary drinks contribute to obesity, diabetes, and tooth decay. That determination rests on a foundation of solid scientific evidence.

A. Consuming SSBs Contributes To Obesity.

The contribution of added sugars to obesity is widely recognized. The DGAC, the federal government's foremost advisory body on nutrition, gave its highest grade, "Strong," to a recommendation to limit added sugar intake to below 10 percent of total calories, because "Strong and consistent evidence shows that intake of added sugars from food and/or sugar-sweetened

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[27] *Id*. at 608 (citing National Health and Nutrition Examination Survey (NHANES) 2009-10).

[28] Federal Trade Commission, *Marketing Food to Children and Adolescents: A Review of Industry Expenditures, Activities, and Self-Regulation* (2008) ($28.6 million annually spent on campaigns targeting ethnic youth), *at* www.ftc.gov/sites/default/files/documents/reports/marketing-food-children-and-adolescents-review-industry-expenditures-activities-and-self-regulation/p064504foodmktingreport.pdf

[29] Jennifer Harris, et al., *Sugary Drink FACTS 2014: Some Progress but Much Room to Improve*, RUDD CTR. FOR FOOD POLICY AND OBESITY (2014) at 11, *at* http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf416417

[30] *Id*.

beverages [is] associated with excess body weight in children and adults."[31] The DGAC's conclusion has had a considerable impact. Even the Food & Drug Administration – whose previous pronouncements are heavily relied upon by the ABA, *e.g.*, PI Mot. at 6, 12 – recently "considered the evidence that the DGAC relied upon," as well as the "excess intake of added sugars in the U.S.," and proposed "to require the mandatory declaration of added sugars" on nutrition facts panels and set a Daily Value for added sugars of 10% of calories.[32] In the words of one researcher, "All lines of evidence consistently support the conclusion that the consumption of sweetened beverages has contributed to the obesity epidemic."[33]

1. The Connection Between Consumption of SSBs and Obesity Has Been Amply Demonstrated.

A World Health Organization (WHO) meta-analysis – a collection and analysis of direct studies – concluded that the "systematic review showed a clear positive association between higher intake of sugars and body fatness in adults." The body of research established that "intake of free sugars or sugar sweetened beverages is a determinant of body weight."[34]

Other prominent systematic reviews and meta-analyses concur. "The weight of epidemiologic and experimental evidence indicates that a greater consumption of sugary drinks is associated with weight gain and obesity."[35] Research from the Harvard School of Public Health

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[31] DGAC Report, *supra* n.3, at 20. The final 2015-20 Dietary Guidelines for Americans depart from their own expert panel and call the evidence "moderate" – i.e., "sufficient evidence to draw conclusions" – and still recommend reducing added sugar intake to less than 10% of daily calories. *At* http://health.gov/dietaryguidelines/2015/guidelines/chapter-1/a-closer-look-inside-healthy-eating-patterns/ A leading professor of nutrition called the more "circumspect[]" tone of the DGA toward sugary drinks "weird" because "[c]lear, straightforward advice to cut down on sugary beverages has plenty of historical precedent." She concluded, "[I]t can have only one explanation: politics." Marion Nestle, *The 2015 Dietary Guidelines' Hidden Advice About Sugary Drinks: Definitely There, but Hard to Find* (Jan. 11, 2016), *at* http://www.foodpolitics.com/tag/dietary-guidelines

[32] FDA, *Food Labeling: Revision of the Nutrition and Supplement Facts Labels*, 80 Fed. Reg. 44302 (Jul. 27, 2015), *at* https://www.federalregister.gov/a/2015-17929

[33] Gail Woodward-Lopez et al., *To What Extent Have Sweetened Beverages Contributed to the Obesity Epidemic?* 14 PUB. HEALTH NUTR. 499 (2010) (concluding that the association between sugary beverage consumption and weight gain is stronger than for any other food), *at* http://banpac.org/pdfs/sfs/2011/sodas_cont_obesity_2_01_11.pdf

[34] Lisa Te Morenga, et al., *Dietary Sugars and Body Weight: Systematic Review and Meta-Analyses of Randomised Controlled Trials and Cohort Studies*, 346 BMJ e7492, 5, 7 (2012), *at* http://www.bmj.com/content/bmj/346/bmj.e7492.full.pdf

[35] Vasanti Malik et al., *Intake of Sugar-Sweetened Beverages and Weight Gain: A Systematic Review*, 84 AM. J. CLINICAL NUTR. 274 (2006), *at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3210834/pdf

concluded, "Findings from well-powered prospective cohorts have consistently shown a significant association … and demonstrated a direct dose–response relationship between SSB consumption and long-term weight gain and risk of type 2 diabetes."[36] Prospective cohort studies (i.e., studies tracking a population over time) have yielded "a strong link between SSB consumption and development of obesity."[37] That link has held firm in studies including cohorts of over 50,000 female nurses, more than 40,000 women in the Black Women's Health Study, and over 43,000 Chinese adults in Singapore. A further study of 120,877 initially non-obese women and men in three observational cohorts found that "each daily increase of one 12-oz … serving of SSB was significantly associated with approximately 0.5 kg greater weight gain every 4 years, after adjustment for age, baseline BMI, sleep, changes in physical activity, smoking, TV watching and multiple other dietary factors."[38]

One reason SSBs lead to weight gain is because they tend to be consumed on top of the normal diet. Randomized controlled trials (RCTs) have also shown a direct effect between consumption of SSBs and body weight.

> A recently published meta-analysis of RCTs commissioned by the World Health Organization found that decreased intake of added sugars significantly reduced body weight …, whereas increased sugar intake led to a comparable weight increase…. Recently, two large RCTs with a high degree of compliance provided convincing data that reducing consumption of SSBs significantly decreases weight gain and adiposity in children and adolescents.[39]

Because people do not typically reduce their calorie intake from other sources sufficiently to compensate for the calories consumed in SSBs (in part because beverages satisfy hunger less

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[36] Hu, *Resolved*, *supra* n.1, at 606.

[37] Vasanti Malik, et al., *Sugar-Sweetened Beverages and Weight Gain in Children and Adults: A Systematic Review and Meta-analysis*, 98 AM. J. CLINICAL NUTR. 1084 (2013), *at* http://www.ncbi.nlm.nih.gov/pubmed/23966427

[38] Hu, *Resolved*, *supra* n.1, at 608 (endnotes omitted) (referring to the Nurses' Health Study, Nurses' Health Study II and Health Professionals' Follow-up Study).

[39] *Id*. at 606, citing Janne de Ruyter et al. *A Trial of Sugar-Free or Sugar-Sweetened Beverages and Body Weight in Children*, 367 NEJM 1397 (2012), *at* http://www.nejm.org/doi/full /10.1056/NEJMoa1203034#t=article; Cara Ebbeling et al., *A Randomized Trial of Sugar-Sweetened Beverages and Adolescent Body Weight*, 367 NEJM 1407 (2012), *at* http://www.nejm.org/doi/full/10.1056/NEJMoa1203388#t=article.

than do solid foods), SSB consumption results in an overall increase in calories consumed.[40] Extensive studies confirm that consuming (non-viscous) beverages is not associated with any corresponding reduction in calorie intake from solid food.[41] The consequences can be severe.

> A typical 12 oz (360 ml) serving of soda contains on average 140 to 150 calories and 35 to 37.5 g of sugar. If these calories are added to the typical diet without compensation for the additional calories, 1 can of soda/day could, in theory, lead to a weight gain of 5 lbs in 1 year. Short-term feeding studies comparing SSBs with artificially sweetened beverages in relation to energy intake and weight change illustrate this point.[42]

In sum, the "evidence that SSB intake is causally related to increased risk of obesity" is "compelling."[43] The strong link between SSB consumption and weight gain holds true through analyses of strength consistency, temporality, dose-response relationship, biological plausibility, alternate explanations, and experimental data, so that "current evidence on SSBs and obesity meets all key criteria commonly used to evaluate causal relationships in epidemiology."[44]

2. Studies Questioning the Contribution of SSBs to Obesity Contain Methodological Weaknesses.

As noted, the evidence linking SSBs and obesity is strong. Studies suggesting otherwise generally contain methodological problems. For example, the DGAC determined, after examining three "high quality" meta-analyses, that the two finding a strong connection between SSBs and

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[40] Vasanti Malik, et al., *Sugar-Sweetened Beverages and Risk of Metabolic Syndrome and Type 2* Diabetes*: A Meta-Analysis*, 33 DIABETES CARE 2477, 2482 (2010), *at* http://care .diabetesjournals.org/content/33/11/2477.full; An Pan & Frank Hu, *Effects of Carbohydrates on Satiety: Differences Between Liquid and Solid Food*, 14 CURR. OPIN. CLIN. NUTR. METAB. CARE 385 (2011), *at* http://www.kickthecan.info/sites/default/files/documents/00075197-201107000-00013.pdf

[41] Doreen DiMeglio & Richard Mattes, *Liquid Versus Solid Carbohydrate: Effects on Food Intake and Body Weight*, 24 INT'L J. OBESITY & RELATED METABOLIC DISORDERS 794 (2000); Diane DellaValle et al., *Does the Consumption of Caloric and Non-Caloric Beverages With a Meal Affect Energy Intake?* 44 APPETITE 187 (2005); Denise Mourao et al., *Effects of Food Form on Appetite and Energy Intake in Lean and Obese Young Adults*, 31 INT'L J. OBESITY 1688 (2007); Julie Flood-Obbagy & Barbara Rolls, *The Effect of Fruit in Different Forms on Energy Intake and Satiety at a Meal*, 52 APPETITE 416 (2009).

[42] Vasanti Malik & Frank Hu, *Fructose and Cardiometabolic Health: What the Evidence From Sugar-Sweetened Beverages Tells Us*, 66 J. AM. COLL. CARDIOL. 1615, 1620 (2015) (citing studies), *at* http://content.onlinejacc.org/article.aspx?articleID=2445331

[43] Hu, *Resolved*, *supra* n.1, at 612.

[44] *Id*.

body weight[45] were "stronger" than the third,[46] which found the evidence equivocal; the latter was weakened by "methodological issues."[47]

Methodological problems likewise affect other studies that appear to show little or no independent effect from SSBs on weight gain.[48] In particular, these studies – including those relied on by plaintiffs[49] – generally have adjusted for total energy intake in order to test whether calories from sugar have a different effect on body weight than calories from other sources. The trouble with such an approach is that – as noted – consuming added sugars, and particularly added sugars in liquid form, has been shown to increase the total number of calories a person consumes.[50] If much of the effect of SSBs on weight gain is attributable precisely to the fact that SSBs increase total calorie intake, then "adjusting" for total energy intake will "artificially underestimate the association between SSBs and body weight."[51]

To analogize: If researchers wanted to test whether football players are more likely to experience concussions than non-football players, it would not make sense to "correct" for the amount of time spent playing football. Doing so would test only whether football players are more likely than non-football players to experience concussions when *not* playing football. A negative result would just obscure the fact that football players experience more concussions, *because* they play more football. Similarly, adjusting for calorie intake just obscures the fact that SSB drinkers gain more weight, largely *because* they consume more calories.

Further, meta-analyses that rely exclusively on randomized controlled studies are necessarily incomplete, because of cost and compliance issues.[52] Many of the RCTs "suffer from

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[45] Te Morenga et al., *Dietary Sugars and Body Weight*, *supra* n. 34; and Malik, et al. *Sugar-Sweetened Beverages and Weight Gain in Children and Adults*, *supra* n. 37.

[46] Kathryn Kaiser et al., *Will Reducing Sugar-Sweetened Beverage Consumption Reduce Obesity? Evidence Supporting Conjecture Is Strong, But Evidence When Testing Effect Is Weak*, 14 OBES. REV. 620 (2013), *at* http://www.ncbi.nlm.nih.gov/pubmed/23742715

[47] DGAC Report (2015), *supra* n.3, at 26.

[48] Hu, *Resolved*, *supra* n.1, at 608.

[49] *See* PI Mot. at 12-14; Kahn Aff. at 13-19.

[50] Hu, *Resolved*, *supra* n.1, at 608.

[51] *Id*. (critiquing Richard Forshee et al., *Sugar-Sweetened Beverages and Body Mass Index in Children and Adolescents: A Meta-Analysis*, 87 AM. J. CLIN. NUTR. 1662 (2008)).

[52] Hu, *Resolved*, *supra* n.1, at 10 (discussing Kaiser et al., *Will Reducing Sugar-Sweetened Beverage Consumption Reduce Obesity?*, *supra* n. 46).

small sample sizes, short duration, poor compliance, lack of randomization at the individual level, lack of blinding and the overstating of subgroup findings."[53] Others, better designed, have shown a direct connection between SSB consumption and body weight.[54] Still, to draw an inference about causality between SSBs and obesity and related diseases, it is essential to consider evidence not only from RCTs but also from prospective cohort studies, which are better suited to investigate long-term associations between dietary exposures and chronic disease risk.[55] These more thorough and complete meta-analyses – unlike the studies put forward by plaintiffs[56] – are, as the DGAC confirmed, the most credible reviews.[57]

Of course, with respect to the accuracy of San Francisco's warning label measure, it does not matter whether SSBs induce weight gain by increasing calorie consumption or through other mechanisms. Given that SSBs are a significant added source of calories with virtually no nutritive value in a nation where a full third of adults are obese or overweight, these products plainly "contribute to obesity."

B. Consuming SSBs Contributes To Type 2 Diabetes.

The 2015 DGAC determined that "[c]ompelling evidence indicates that reducing SSBs will have significant impact on the prevalence of obesity and its related diseases, especially T2D."[58] The committee gave its highest grade, "Strong," to the proposition that "[s]trong evidence shows that higher consumption of added sugars, especially sugar-sweetened beverages, increases the risk of type 2 diabetes among adults and this relationship is not fully explained by body weight."[59]

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[53] Richard Mattes et al, *Nutritively Sweetened Beverage Consumption and Body Weight: A Systematic Review and Meta-Analysis of Randomized Experiments*, 12 OBES. REV. 346 (2011), *at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3169649

[54] *See supra* n. 39 & accompanying text.

[55] DGAC Report, *supra* n.3, at 21.

[56] *See, e.g.*, Kahn Aff. at ¶ 34.

[57] DGAC Report, *supra* n.3, at 26.

[58] Hu, *Resolved*, *supra* n.1, at 617.

[59] DGAC Report, *supra* n.3, at 20, 22. As with obesity, *see supra* n. 31, the Dietary Guidelines themselves departed from the recommendation of their scientific advisory panel, deeming the evidence moderate – i.e., "sufficient evidence to draw conclusions" – while still calling for a reduction in sugary drink intake and a limit of 10% of calories from added sugars.

The DGAC's conclusions are well supported. Data from the Nurses' Health Study II show that replacing SSBs with either water[60] or coffee[61] is associated with a significantly lower risk of diabetes. A recent meta-analysis of studies on SSBs and diabetes concluded, based on data from studies including 310,819 participants and 15,043 cases of T2D, that there was "an excess risk of 26% associated with higher consumption of SSBs compared with lower consumption."[62] This link was "consistent across ethnic groups…, genders and age groups" as well as studies from other countries.[63] The meta-analysis concluded: "Several lines of evidence, taken together, meet the key . . . criteria to establish a causal relationship between SSB consumption and risk of T2D."[64]

Studies that do not find a link between SSBs and diabetes generally suffer from the same fundamental methodological problem explained *supra* regarding obesity: they "adjust" for calorie intake and BMI. If "approximately half of the effects of SSBs on type 2 diabetes [a]re mediated through obesity," then "adjustment for [calorie intake and BMI] will tend to underestimate any effect."[65] In other words, SSBs make people heavier, and greater weight increases their risk of diabetes. So it doesn't make sense to adjust results of studies to eliminate differences in weight as a factor in determining whether SSBs cause diabetes. Yet that is precisely what the studies relied on by plaintiffs do.[66]

In fact, studies that adjust for BMI show that SSBs contribute to diabetes even beyond their contribution to obesity. A recent meta-analysis of 17 cohort studies, for example, found that a 1-serving/day increase in SSBs was associated with an 18% increased risk of diabetes.

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[60] An Pan et al., *Plain-Water Intake and Risk of Type 2 Diabetes in Young and Middle-Aged Women*, 95 AM. J. CLIN. NUTR. 1454 (2012), http://ajcn.nutrition.org/content/95/6/1454.full.pdf

[61] Lawrence de Koning et al., *Sugar Sweetened and Artificially Sweetened Beverage Consumption and Risk of Type 2 Diabetes in Men*, 93 AM. J. CLIN. NUTR. 1321 (2011), *at* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3095502

[62] Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2480.

[63] Hu, *Resolved*, *supra* n.1, at 7 (citing The InterAct Consortium, *Consumption of Sweet Beverages and Type 2 Diabetes Incidence in European Adults*, DIABETOLOGIA (2013)).

[64] *Id*. at 8, Table 2 (taking into account strength of association, consistency, specificity, temporality, biological gradient, biological plausibility, and experimental evidence).

[65] Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2482, 2481 (citing Matthias Schulze, et al., *Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women*, 292 JAMA 927 (2004)).

[66] It is appropriate for studies to control for total calories and obesity to examine the hormonal consequences of diets heavy in added sugars (e.g., how people become insulin resistant and then wind up diabetic). The problem here is that the ABA is misrepresenting some of these studies.

Adjusting for BMI, the increased risk was still 13%.[67] There is strong evidence that SSBs contribute to T2D for reasons in addition to weight gain.[68] The additional effects "may … stem from the high levels of rapidly absorbable carbohydrates in the form of added sugars."[69] SSBs lead to fat accumulation in the liver and muscle,[70] which may promote insulin resistance.[71] SSBs may also increase the "risk of developing cholesterol gallstone disease, which is associated with insulin resistance, metabolic syndrome, and type 2 diabetes." Finally, SSBs may lead to accumulation of triglycerides in the liver, which can also induce insulin resistance and increase the risk of T2D.[72]

Of course, the contribution of SSBs to obesity alone, which in turn is a primary risk factor for T2D, suffices to establish that consuming SSBs contributes to diabetes.[73]

C. Consuming SSBs Contributes To Tooth Decay.

"Sugars are undoubtedly the most important dietary factor in the development of dental caries,"[74] and there is "overwhelming evidence of [their] unique role in causing a worldwide caries epidemic."[75] The role of sugars is clear: "sucrose causes major biochemical and physiological changes [on teeth] during the process of biofilm formation, which, in turn, enhance its caries-inducing properties."[76] SSBs are, as noted, the single largest source of free sugars (i.e., added sugars plus sugars present in honey, syrups and fruit juices) in the American diet. *See supra* §I.B.

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[67] Malik & Hu, *Fructose and Cardiometabolic Health*, *supra* n. 42.
[68] DGAC Report, *supra* n. 3, at 22.
[69] Malik, *Sugar-Sweetened Beverages and Risk*, *supra* n. 40, at 2482.
[70] Maria Maersk et al., *Sucrose-Sweetened Beverages Increase Fat Storage in the Liver, Muscle, and Visceral Fat Depot*, 95 AM J. CLIN. NUTR. 283 (2012), *at* http://ajcn.nutrition.org/content/95/2/283.full.pdf+html
[71] Malik & Hu, *Fructose and Cardiometabolic Health*, *supra* n. 42.
[72] Kimber Stanhope & Peter Havel, *Fructose Consumption: Potential Mechanisms for Its Effects to Increase Visceral Adiposity and Induce Dyslipidemia and Insulin Resistance*, 19 Curr. Opin. Lipidol. 16 (2008), at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4151171
[73] A recent study showed that limiting SSB intake reduced body weight and improved insulin sensitivity in only 9 days in obese Hispanic and African-American children. Robert Lustig, et al., *Isocaloric Fructose Restriction and Metabolic Improvement in Children with Obesity and Metabolic Syndrome*, 24 OBESITY 453 (2015). Whether this improvement was mediated by weight loss or a specific effect of sugar reduction on insulin is less important than the finding that risk factors for obesity and diabetes in vulnerable populations were improved in only 9 days.
[74] Sheiham & James, *A New Understanding*, *supra* n. 24, at 2176.
[75] Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1341.
[76] *Id*. at 1342, 1341. Other potential causes like processed food starches possess "a very low cariogenic potential." *Id*. at 1346.

The link between free sugars and caries is confirmed in international situations of reduced sugar availability. "[L]evels of dental caries in Iraqi children halved after … sanctions reduced sugars from 50 kg/capita per year … to 12 kg/capita per year 5 years later."[77] Similar results emerged from longitudinal studies in Japan during and after the Second World War.[78]

The strength of the evidence for the contribution of sugar to caries is not contradicted by a DGAC conclusion, based on a WHO analysis, that only "moderate consistent evidence supports a relationship between the amount of free sugars intake and the development of dental caries."[79] The WHO meta-analysis concerned not whether added sugar contributes to dental caries but rather whether incidence of dental caries varies in direct proportion to the amount of sugar consumed, and particularly whether the WHO's specific 10% threshold for added sugars was justified.[80] There was no serious question about the general proposition that free sugars contribute to tooth decay. Moreover, DGAC's finding of "moderate" evidence seems to have resulted not from any contrary evidence, but rather – in an abundance of caution – from a lack of randomized-controlled trials.[81] The WHO review noted "evidence of a large effect for the individual cohort studies" and "[a] consistent association … : 7 out of 8 studies reported higher dental caries with higher sugars intake." Further, "[p]opulation studies support the dose-response effect, with 18 out of 20 showing a positive . . . association between sugars intake and dental caries. Nine population studies provided evidence of positive correlations between sugars intake and caries levels."[82]

A recent guest editorial in the Journal of the American Dental Association summarized:

> Dental cavities are the most prevalent chronic disease in the United States and are a significant cause of health inequalities. There is a strong link between the amount and frequency of sugar consumed and dental cavities. The primary cause of dental cavities is a diet high in sugar, and the primary source of sugar in children's diets is sugary

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[77] *Id*. at 1343.
[78] *Id*.
[79] DGAC Report, *supra* n. 3, at 20.
[80] Paula Moynihan & S.A.M. Kelly, *Effect on Caries of Restricting Sugars Intake: Systematic Review to Update WHO Guidelines*, 93 J. DENT. RES. 8 (2014), *at* http://www.ncbi.nlm .nih.gov/pmc/articles/PMC3872848
[81] Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1343 (noting, "the difficulty of undertaking single-blind, let alone double-blind, community-based randomized trials of sucrose reduction over sufficient periods to monitor dental caries development makes it impossible to satisfy the current WHO assessment of the strength of evidence").
[82] Moynihan & Kelly, *Effect on Caries, supra* n. 80.

drinks.[83]

D. The Sugar And Beverage Industries Have Long Worked To Create Scientific 'Controversy' By Influencing Academic Studies, Public Health Organizations, And Government Policy.

Any 'controversy' that may exist about the clear and consistent conclusions of well-designed and unbiased studies linking SSBs to disease has little to do with their merits. "The long-standing failure to identify the need for drastic national reductions in sugars intakes reflects scientific confusion partly induced by pressure from major industrial sugar interests."[84]

Recently researchers analyzing archival internal sugar industry documents revealed that, as early as 1950, "sugar industry trade organizations had accepted that sugar damaged teeth and had recognized that the dental community favored restricting sugar intake as a key way to control caries."[85] The industry set out to change that. The 1950 Sugar Research Foundation [SRF] annual report explicitly stated that "[t]he ultimate aim of the Foundation in dental research has been to discover effective means of controlling tooth decay by methods other than restricting carbohydrate intake." For decades SRF "influenced policy . . . to exclude the proposal to restrict sugars consumption to prevent caries."[86]

Between 2010 and 2015 Coca-Cola alone gave almost $120 million in grants to medical, health, and community organizations, including $29 million to fund academic research.[87] Just two months ago, "[a] group called the Global Energy Balance Network (GEBN), led by scientists and created by Coca-Cola, announced … that it was shutting down after months of pressure from public health authorities who said that the group's mission was to play down the link between soft drinks and obesity."[88]

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[83] Rob Beaglehole, *Dentists and Sugary Drinks: A Call to Action*, 146 J. AM. DENTAL ASS'N 73 (Feb. 2015), *at* http://jada.ada.org/article/S0002-8177(14)00060-9/pdf

[84] Sheiham, *Diet and Dental Caries*, *supra* n. 21, at 2176.

[85] Cristin Kearns et al., *Sugar Industry Influence on the Scientific Agenda of the National Institute of Dental Research's 1971 National Caries Program*, 12 PLOS MED. e1001798 (2015), *at* http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001798

[86] Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1345.

[87] Anahad O'Connor, *Coke Spends Lavishly on Pediatricians and Dietitians*, N.Y. TIMES (Sept. 28, 2015), *at* http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-and-dietitians

[88] Anahad O'Connor, *Research Group Funded by Coca-Cola to Disband*, N.Y. TIMES (Dec. 1, 2015), http://well.blogs.nytimes.com/2015/12/01/research-group-funded-by-coca-cola-to-disband

Yet decades of funding for industry-friendly studies have had an effect. A 2007 study found that medical research articles about soft drinks, juice, and milk "sponsored exclusively by food/drinks companies were four to eight times more likely to have conclusions favorable to the financial interests of the sponsoring company."[89] A 2013 analysis found that studies "funded by Coca-Cola, PepsiCo, the American Beverage Association and the sugar industry were five times more likely to find no link between sugary drinks and weight gain."[90] Of twelve reviews reporting no financial conflicts of interest, ten found a positive association between SSB consumption and weight gain; meanwhile, of six reviews reporting industry funding, five found the evidence insufficient to support a positive association.[91]

The impact of industry funding has extended beyond academia. In 2003, the World Sugar Research Organisation (WSRO), a trade organization that includes Coca-Cola, successfully blocked a WHO committee recommendation limiting free or added sugars to 10% of total calories from becoming WHO policy. A similar policy proposal was reintroduced in 2014; WSRO submitted comments arguing that "dental public health interventions should focus on reducing the harm of sugar consumption with methods such as the 'regular use of fluoride toothpaste' rather than restricting sugar intake."[92]

Public health organizations have not been immune. In 2003,

> the American Academy of Pediatric Dentistry received $1 million from the Coca-Cola Company. A few months later, the academy stated that "scientific evidence is not clear on the exact role that soft drinks play in terms of children's oral disease." This contradict[ed] their previous statement that "consumption of sugars in any beverage

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[89] Lenard Lesser et al., *Relationship Between Funding Source and Conclusion Among Nutrition-Related Scientific Articles*, 4 (1) PLOS MED. 41, 44 (2007), *at* http://journals.plos.org /plosmedicine/article?id=10.1371/journal.pmed.0040005; *accord* Lenny Vartanian et al (2007). *Effects of Soft Drink Consumption on Nutrition and Health: A Systematic Review and Meta-Analysis*, 97 AMER. J PUB. HEALTH 667 (2013), *at* http://www.ncbi.nlm.nih.gov/ pmc/articles/PMC1829363

[90] Anahad O'Connor, *Coca-Cola Funds Scientists Who Shift Blame for Obesity Away From Bad Diets*, N.Y. TIMES (Aug. 9, 2015), *at* http://well.blogs.nytimes.com/2015/08/09/coca-cola-funds-scientists-who-shift-blame-for-obesity-away-from-bad-diets (citing Maira Bes-Rastrollo et al., *Financial Conflicts of Interest and Reporting Bias Regarding the Association Between Sugar-Sweetened Beverages and Weight Gain: A Systematic Review of Systematic Reviews*, 10 PLOS Med. 1 (2013)).

[91] Bes-Rastrollo et al., *Financial Conflicts of Interest*, *supra* n. 90, *at* http://journals.plos.org /plosmedicine/article?id=10.1371/journal.pmed.1001578#s3

[92] Kearns et al., *Sugar Industry Influence on the Scientific Agenda*, *supra* n. 85, at e1001798.

> can be a significant factor that contributes to dental caries." Fortunately, the academy now states that "frequent ingestion of sugars and other carbohydrates (eg, fruit juices, acidic beverages) … are [among] particular risk factors in the development of caries.[93]

The Academy of Nutrition and Dietetics (AND), the organization of nutrition professionals cited by the ABA as approving the consumption of added sugar "'in moderation,'" PI Mot. at 12,[94] has received $1.7 million in funding from Coca-Cola since 2010. AND has been widely criticized for "haul[ing] in large sums of money advocating for the food industry."[95] In 1995, for example, an AND nutrition fact sheet, sponsored by the National Association of Margarine Manufacturers, proclaimed: "There is little scientific evidence to suggest that current consumption levels of trans-fatty acids need to be changed."[96] Trans fats have since been banned from the nation's food supply because of their adverse health impacts.[97]

While it may be technically true that Dr. Richard Kahn, the ABA's chief scientific expert in this case, has himself "never received any form of compensation or funding from the beverage industry," Kahn Aff., ¶ 2, under his leadership the American Diabetes Association entered into a $1.5 million sponsorship agreement with Cadbury-Schweppes.[98] Dr. Kahn's Affidavit repeatedly cites, *e.g*. Kahn Aff., n. 5, an article he co-authored with David Sievenpiper,[99] who discloses in that article that he received funding from Coca-Cola and speaker's fees and honoraria from Coca-Cola and the Dr Pepper Snapple Group.[100] An author of at least one of the studies reviewed in that article responded that "Kahn and Sievenpiper misrepresented the outcome of our trial of sugar-

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[93] Rob H. Beaglehole, *Dentists and Sugary Drinks, supra* n. 83, at 74.

[94] Citing Comp. ¶ 139(a) (identifying AND as the organization in question).

[95] Sheldon Rampton & John Stauber, *Trust Us, We're Experts!: How Industry Manipulates Science and Gambles with Your Future* (2002) (AND was then known as the American Dietetic Association).

[96] Marian Burros, *Group's Pursuit of Cash Draws Fire*, MILWAUKEE J. SENTINEL (Dec. 6, 1995), *at* http://www.cspinet.org/new/industryties_salt.html

[97] Brady Dennis, *FDA Moves to Ban Trans Fat From US Food Supply*, WASH. POST (June 16, 2015), https://www.washingtonpost.com/national/health-science/fda-moves-to-ban-trans-fat-from-us-food-supply/2015/06/16/f8fc8f18-1084-11e5-9726-49d6fa26a8c6_story.html

[98] Marc Santora, *In Diabetes Fight, Raising Cash and Keeping Trust*, N.Y. TIMES (Nov. 25, 2006), http://www.nytimes.com/2006/11/25/health/25ada.html

[99] *E.g*. Kahn Aff., n. 5.

[100] Richard Kahn & David Sievenpiper, *Dietary Sugar and Body Weight: Have We Reached a Crisis in the Epidemic of Obesity and Diabetes?*, 37 DIABETES CARE 957, 961 (2014), http://care.diabetesjournals.org/content/37/4/957.full.pdf

sweetened beverages and body weight in children."[101] Dr. Kahn's Affidavit also relies on articles authored and co-authored by James Rippe.[102] Not only did Rippe's research group receive $10 million in funding from a corn syrup industry trade group, but Rippe personally received a $41,000-per-month retainer from the group.[103]

In sum, "[t]he industry's tactic is to undermine all the scientific evidence by supporting scientists who offer contrary evidence, thereby creating a 'controversy.'"[104] Scientists have decried these efforts to "confuse the science and deflect attention from dietary intake"[105] and called industry support of "prominent health researchers … reminiscent of tactics used by the tobacco industry, which enlisted experts to become 'merchants of doubt'."[106]

E. There is Broad Consensus Among National And International Public Health Organizations That Consumption of SSBs Should Be Limited In Order To Reduce Chronic Disease.

Despite industry's best (and continuing) efforts, the most respected and influential voices in public health agree that SSBs contribute to obesity, diabetes and tooth decay, and uniformly recommend limiting intake of added sugars and specifically SSBs.

The advisory committee for the recently-released Dietary Guidelines for Americans concluded that "[o]besity, type 2 diabetes, . . . and dental caries are major public health concerns. Added sugars intake negatively impacts all of these conditions, and strong evidence supports

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[101] Martijn Katan, *Comment on Kahn & Sievenpiper, Dietary Sugar and Body Weight*, 37 DIAB. CARE e188 (2014), *at* http://care.diabetesjournals.org/content/37/8/e188.full.pdf

[102] *E.g.*, Kahn Aff., nn. 12, 34; s*ee also* Kimber, *Sugar Consumption, Metabolic Disease, and Obesity*, 53 CRIT. REV. CLIN. LAB. SCI. 52 (2015) at 7 (cited in Kahn Aff. at ¶ 42) (noting of Rippe study that "the inexplicable use of milk as a vehicle for the study, the lack of a control group, … and the lack of objective compliance monitoring … give the appearance that the objective of this industry-sponsored study was not to answer an important public health question, but to generate results that will assure the public that the current level of sugar consumption is safe and maintain the state of controversy").

[103] Eric Lipton, *Rival Industries Sweet-Talk the Public*, N.Y. TIMES (Feb. 11, 2014), *at* http://www.nytimes.com/2014/02/12/business/rival-industries-sweet-talk-the-public.html

[104] Sheiham & James, *Diet and Dental Caries*, *supra* n. 21, at 1345, citing Gretchen Goldman et al., *Added Sugar, Subtracted Science – How Industry Obscures Science and Undermines Public Health Policy on Sugar*, CTR. FOR SCIENCE AND DEMOCRACY (2014), *at* http://www.ucsusa.org/assets/documents/center-for-science-and-democracy/added-sugar-subtracted-science.pdf

[105] Prof. Marion Nestle, *quoted in* O'Connor, *Coca-Cola Funds Scientists*, *supra* n. 90.

[106] Prof. Barry Popkin, *quoted in* O'Connor, *Coca-Cola Funds Scientists*, *supra* n. 90.

reducing added sugars intake to reduce health risks."[107] The DGAC noted that "[t]he recommendation to limit added sugars, especially sugar-sweetened beverages, is consistent with recommendations from national and international organizations including the American Academy of Pediatrics, World Health Organization, American Heart Association, Centers for Disease Control and Prevention, and the American Diabetes Association."[108]

The Surgeon General of the United States has placed "reducing consumption of sodas and juices with added sugars" as the first item on a list of changes needed to improve the nation's health.[109] The Food & Drug Administration, reconsidering earlier positions, has proposed that added sugars be listed separately on the Nutrition Facts Panel and that a Daily Value of 10% of calories from added sugars be set.[110] The World Health Organization grades the evidence as "strong" supporting a guideline that children reduce their intake of SSBs and that people of all ages reduce intake of free sugars to no more than 10% of total calories consumed.[111] The American Heart Association "recommends reductions in added sugars."[112] The CDC calls on communities to "discourage consumption of sugar-sweetened beverages."[113] The American Diabetes Association notes that "[r]esearch has shown that drinking sugary drinks is linked to type 2 diabetes" and "recommends that people should avoid intake of sugar-sweetened beverages."[114] The American Academy of Pediatrics (AAP) has noted "[p]otential health problems associated with high intake of sweetened drinks, [including] overweight or obesity [and] dental caries and potential enamel

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[107] DGAC Report, *supra* n. 3, at 26.
[108] *Id*.
[109] *The Surgeon General's Vision for a Healthy and Fit Nation*, *Fact Sheet* (2010), http://www.surgeongeneral.gov/priorities/healthy-fit-nation/obesityvision_factsheet.html
[110] *See supra* n. 32 & accompanying text.
[111] WORLD HEALTH ORGANIZATION, Guideline: Sugars Intake for Adults and Children (2015), *at* http://apps.who.int/iris/bitstream/10665/149782/1/9789241549028_eng.pdf
[112] Linda Van Horn et al., *Translation and Implementation of Added Sugars Consumption Recommendations*, 122 CIRCULATION 2470 (2010), *at* http://circ.ahajournals.org/content /122/23/2470.long
[113] CDC, *Recommended Community Strategies and Measurements to Prevent Obesity in the U.S.* Morb. and Mort. Weekly Rep., (July 24, 2009), *at* http://www.cdc.gov/mmwr/preview /mmwrhtml/rr5807a1.htm
[114] AM. DIABET. ASS'N, *Diabetes Myths*, *at* http://www.diabetes.org/diabetes-basics/myths

erosion."[115] The American Dental Association advises: "Limit added sugars in your diet"[116]; "If you consume too many sugar-filled sodas …, you could be at risk for tooth decay."[117]

All of these organizations – along with, among others, the United States Departments of Agriculture and Health & Human Services,[118] the American Medical Association,[119] and the Institute of Medicine of the National Academies[120] – are convinced of the evidence and calling for reductions in consumption of SSBs for prevention of obesity and chronic diseases.[121]

The same is true, of course, for the signatories to this brief.

III. THE MANDATED WARNINGS ARE FACTUAL AND ACCURATE COMMERCIAL DISCLOSURES, AND EASILY PASS THE LENIENT FIRST AMENDMENT REVIEW THAT APPLIES.

Measures that foster, rather than impede, the flow of useful information to consumers – "factual and uncontroversial" disclosures in commercial contexts – are subject to deferential First Amendment review. *Zauderer*, 471 U.S. at 651. Ordinance No. 100-15 is such a measure.

A. The Required Warnings Are Factual And Uncontroversial.

A factual and uncontroversial statement is in essence one that is actually informative, rather than a statement of personal belief or a factual claim of questionable accuracy.

Specifically, "factual" statements are statements made true or false by objective, discoverable facts; they contrast with statements of opinion, value, personal preference, or

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[115] AAP, Comm. on Sch. Health, *Soft Drinks in Schools*, 113 PEDIATRICS (Jan. 2004), *at* http://pediatrics.aappublications.org/content/113/1/152. The AAP said this even while receiving more than $3 million from the Coca-Cola Company over the past 5 years, a relationship it recently severed. *See* Anahad O'Connor, *Coke Spends Lavishly on Pediatricians and Dietitians*, N.Y. TIMES (Sep. 28, 2015), *at* http://well.blogs.nytimes.com/2015/09/28/coke-spends-lavishly-on-pediatricians-and-dietitians/

[116] AM. DENT. ASS'N, Mouth Healthy, *Nutrition*, *at* http://www.mouthhealthy.org/en/nutrition

[117] AM. DENT. ASS'N, Mouth Healthy, *Diet and Dental Health*, *at* http://www.mouthhealthy.org/en/az-topics/d/diet-and-dental-health

[118] DGAC Report, *supra* n. 3, at 26.

[119] Sarah Barlow, *Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity*, 120 PEDIATRICS S164–S192 (2007), *at* http://pediatrics.aappublications.org/content/120/Supplement_4/S164

[120] INST. OF MEDICINE, *Local Government Actions to Prevent Childhood Obesity* (2009) at 5 (calling for action to "increase access to free, safe drinking water in public places to encourage water consumption instead of sugar-sweetened beverages" and "implement a tax strategy to discourage consumption of food and beverages that have minimal nutritional value, such as sugar-sweetened beverages"), *at* https://www2.aap.org/obesity/community_advocacy/IOM.pdf

[121] Hu, *Resolved*, *supra* n.1, at 617.

ideology. *See Disc. Tobacco City & Lottery, Inc. v. United States*, 674 F.3d 509, 556 (6th Cir. 2012) (distinguishing between facts and personal or political opinions); *Entm't Software Ass'n v. Blagojevich*, 469 F.3d 641, 652 (7th Cir. 2006) (required labels were not factual, because definition of "sexually explicit" is "subjective" and "opinion-based").

A factual statement is "uncontroversial" if its truth is well established. *See Disc. Tobacco*, 674 F.3d at 560 (asking whether required warnings were "accurate" as well as factual to determine if *Zauderer* review applied); *Nat'l Elec. Mfrs. Ass'n v. Sorrell*, 272 F.3d 104, 114 (2d Cir. 2001) ("mandated disclosure of *accurate*, factual, commercial information" is reviewed under *Zauderer*) (emphasis added).

"Drinking beverages with added sugar(s) contributes to obesity, diabetes, and tooth decay" is a factual claim. The key question in this case is whether it is accurate.

1. The Accuracy of the Required Warnings is Solidly Established.

As demonstrated, *supra* § II, the accuracy of the warning is amply established by numerous long-term studies and randomized controlled trials demonstrating that higher rates of SSB consumption are strongly linked to higher rates of obesity, diabetes, and tooth decay.

Because the contributions of SSB consumption to obesity, diabetes, and tooth decay are so well established, the ABA seeks to distort the meaning of the required warnings by transmuting well established public health findings into implausible generalizations. *See* PI Mot. at 6. The warning cannot plausibly be read to state or imply that *any* level of consumption of SSBs "necessarily and inevitably" produces obesity, diabetes, and tooth decay – no reasonable reader would infer that any individual who consumes a single soft drink will inevitably suffer from obesity, diabetes, and tooth decay.

That some authorities have stated that some "moderate" consumption of SSBs may be safe, given an otherwise healthy lifestyle, PI Mot. at 12, 13, does not make the accuracy of the warnings controversial. Their accuracy is not belied, but actually corroborated, by the fact that more moderate consumption of SSBs results in more moderate risk of adverse health effects. Moreover, even levels of consumption widely seen as "moderate" *are* problematic:

> [WHO] recommends that people limit their added sugar intake to less than 10% of their

> calories and says cutting it to 5% provides additional health benefits. For a person on a 2,000 calorie diet, 5% of calories amounts to 100 calories a day, which means a single 12-ounce soda puts you over the limit.[122]

Drinking just one soda per day increases a child's odds of developing obesity by 55%, and a woman's risk of developing type 2 diabetes by 80%.[123] In fact, the widespread, mistaken belief that what many consider moderate consumption is not harmful itself represents a substantial challenge to public health. Focus groups on prospective anti-SSB advertising by the New York City Health Board elicited such comments as "'Anything in moderation is okay'" and "drinking one or two sodas a day wasn't a problem," when "[i]n fact, an additional one or two sodas every day might be enough to drive the entire obesity epidemic."[124]

Disagreement over whether added sugars contribute more to obesity or diabetes than an equivalent number of calories in other form, PI Mot. at 12-13, does not call the accuracy of the warning into question either. There is in fact substantial evidence that added sugars – particularly in liquid form – are more harmful than other calories. *See supra* §§II.A-C. But the warnings are accurate regardless. There is ample evidence that SSBs are not consumed *instead of* other calories, but in addition. *See supra* §II.A.1. Similarly, regardless of whether added sugars are more harmful than other sugars, PI Mot. at 13-14, SSBs substantially increase sugar intake and lack the benefits of beverages naturally containing sugar. 100% fruit juices, for example, are a source of naturally occurring vitamins.[125] Milk, besides providing protein and valuable minerals such as calcium, actually *reduces* diabetes risk.[126]

There are sound medical reasons for singling out SSBs. As the largest source of sugar and of calories in the U.S. diet, especially among groups most susceptible to these chronic health

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[122] Tom Farley, *Resurrect the Sugary Soda Tax*, N.Y. DAILY NEWS (Oct. 18, 2015), *at* http://www.nydailynews.com/opinion/tom-farley-resurrect-sugary-soda-tax-article-1.2400779

[123] Te Morenga et al., *Dietary Sugars and Body Weight*, *supra* n. 34.

[124] Tom Farley, SAVING GOTHAM (2015), at 152.

[125] CDC, 60 Morb. & Mortal. Weekly Rep. 778, *Beverage Consumption Among High School Students* (June 17, 2011), *at* http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6023a2.htm

[126] Arne Astrup, *Yogurt and Dairy Product Consumption to Prevent Cardiometabolic Diseases*, 99 AM. J. CLIN. NUTR.1235S (2014), at http://ajcn.nutrition.org/content/99/5/1235S.full; Peter Elwood et al., *Consumption of Milk and Dairy Foods and the Incidence of Vascular Disease and Diabetes*, 45 Lipids 925 (2010), http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2950929

conditions,[127] and with almost no countervailing nutritional benefit, SSBs occupy a position in the American diet that readily merits a warning. As New York City's former Health Commissioner summarized, "In the end, it didn't matter much … whether soda leads to weight gain because it delivers unnecessary calories, or because those calories come from carbohydrates, or because those carbohydrates are sugar, or because the sugar is in liquid form. Sugary drinks make people fat…. And that mattered very much."[128]

2. The Existence of Some Scientific Disagreement Does Not Make a Claim 'Controversial'.

A factual claim can be "uncontroversial" even if some scientists may disagree with some aspect. There are scientists in every field who question generally accepted theories. Such diversity may even help to make scientific progress possible.[129] It does not follow that no scientific claim is ever sufficiently well established to support a public warning. "Of course, … the scientific evidence will continue to evolve regarding the health effects of SSBs. … All scientific work is liable to be upset or modified by advancing knowledge. That does not confer upon us a freedom to ignore the knowledge we already have, or to postpone the action it appears to demand at a given time."[130] If scientific unanimity were required for *Zauderer* review to apply, any imaginable science-based disclosure – about health risks, environmental hazards, or other vital information – would be subject to heightened review under the First Amendment. "A 'controversy' cannot be created any time there is a disagreement … because Zauderer would never apply, especially where there are health and safety risks, which invariably are dependent in some degree on the current state of science and research." *CTIA v. City of Berkeley*, No. 15-CV-02529-EMC, 2016 WL 324283, at *6 (N.D. Cal. Jan. 27, 2016).

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[127] Hispanics and African-Americans consume significantly more SSBs than non-Hispanic Caucasians. Cynthia Ogden et al., *Consumption of Sugar Drinks in the United States*, 2005-2008, Nat. Ctr. Health Stat., NCHS Data Brief No. 71 (Aug. 2011) at 3, *at* http://www.cdc.gov/nchs/data/databriefs/db71.pdf

[128] Farley, SAVING GOTHAM, *supra* n. 124, at 103.

[129] *See, e.g.*, Christian Strasser et al., *Heuristic Reasoning*, 16 STUDIES IN APPLIED PHILOSOPHY, EPISTEMOLOGY & RATIONAL ETHICS 113, 113 (2015) ("Many philosophers of science consider scientific disagreement to be a major promoter of scientific progress").

[130] Hu, *Resolved*, *supra* n.1, at 612.

While any current scientific belief might be disproven some day, the ABA's claim that "Yesterday's dietary truths are routinely reevaluated and discarded," PI Mot. at 4, is singularly inapplicable to the health harms of sugar. Nutrition scientists have long been concerned that sugar contributes to weight gain, diabetes, and tooth decay. Internal trade association documents reveal that the sugar industry was aware of potential links between sugar and chronic disease more than half a century ago. Yet the industry continued to deny them publicly for decades thereafter.[131] Indeed, it continues to do so today.

When an evidence-based nutrition determination is endorsed by the United States Surgeon General, the Institute of Medicine, the Dietary Guidelines for Americans Committee, the World Health Organization, and a host of preeminent national and international public health NGOs,[132] *see supra* §II.E, while research calling it into question is largely supported by funding from the sugar and soda industries, *see supra* §II.D, that determination can hardly be deemed 'controversial.'[133] *Zauderer* review applies.[134]

B. The ABA Misrepresents The Applicable Legal Standard.

While the required warnings easily survive "reasonable relationship" review under *Zauderer*, 471 U.S. at 651, the ABA's attempts to distort the standard call for a response.

(1) <u>A substantial state interest is not required.</u> While San Francisco's interests in "improved … health" and in "informed consumer choice" with respect to purchases that may affect health,

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[131] Kearns et al, *Sugar Industry Influence on the Scientific Agenda*, *supra* n. 84, at e1001798.

[132] Even the Academy of Nutrition and Dietetics (AND), cited by the ABA, does not dispute the harms of sugar. AND differs only in approving sugar consumption in moderation. AND's credibility is in any event compromised by the large sums it has until recently accepted from the soda industry. *See supra* §II.D.

[133] The consensus is reflected in a proposed California bill that would require nearly identical warnings statewide. SB 203 (2015), *at* https://leginfo.legislature.ca.gov/faces /billNavClient.xhtml?bill_id=201520160SB203/ The nonpartisan national panel of nutrition and public health experts vetting the bill agreed that the warning "is based on strong scientific evidence." Scientific Panel, *SB 203: Warning Labels on Sugary Drinks*, http://www.publichealthadvocacy.org/resources/warninglabel/SB203_PressKit_ScientificPanel.pdf/ Legislation requiring almost identical warnings has also been proposed in New York, Hawaii, Vermont, and Washington. Kick the Can, *Legislative Campaigns*, *at* http://www.kickthecan.info/legislative-campaigns

[134] There is no dispute that the Ordinance affects mostly commercial speech. The message ads adduced by the ABA, PI Mot. at 8, are equally commercial. "[A]dvertising which 'links a product to a current public debate' is not thereby entitled to the constitutional protection afforded noncommercial speech." *Bolger v. Youngs Drug Products Corp.*, 463 U.S. 60, 68 (1983).

S.F. Health Code § 4201, are certainly substantial, as a matter of law they do not need to be. The ABA misleadingly characterizes "reasonably related" review under *Zauderer* as requiring a "substantial [state] interest," on the strength of a single concurring opinion. PI Mot., at 10 (citing *Am. Meat Inst. [AMI] v. USDA*, 760 F.3d 18, 34 (D.C. Cir. 2014) (Kavanaugh, J., concurring in judgment).[135] In actuality, most courts agree that commercial disclosure mandates require only "a conceivable legitimate state purpose." *Beeman v. Anthem Prescription Mgmt., LLC*, 315 P.3d 71, 95 (Cal. 2013); *see also Conn. Bar Ass'n v. United States*, 620 F.3d 81, 101 (2d Cir. 2010) (upholding statutes under *Zauderer* review on the basis of a "legitimate government concern"). The *Zauderer* standard is often likened to "rational basis" review, *e.g. Safelite Grp., Inc. v. Jepsen*, 764 F.3d 258, 264 (2d Cir. 2014); *Greater Baltimore Ctr. for Pregnancy Concerns, Inc. v. Mayor & City Council of Baltimore*, 721 F.3d 264, 283 (4th Cir. 2013); *Disc. Tobacco*, 674 F.3d at 555 (6th Cir. 2012); *Pharm. Care Mgmt. Ass'n v. Rowe*, 429 F.3d 294, 316 (1st Cir. 2005);*United States v. Marzzarella*, 614 F.3d 85, 96 (3d Cir. 2010), which demands only that legislation be "rationally related to *legitimate* governmental objectives," *Schweiker v. Wilson*, 450 U.S. 221, 230 (1981) (emphasis added). The ABA's view makes little sense: if the "constitutionally protected interest in *not* providing any particular factual information … is "minimal," *Zauderer*, 471 U.S. at 651, a weighty government interest should not be needed to override it.

(2) <u>San Francisco need not employ the least restrictive means.</u> The purported availability of less speech-restrictive alternatives, *see* PI Mot. at 22, is irrelevant. *See Zauderer*, 471 U.S. at 651 n. 14 ("We reject [the] contention that we should subject disclosure requirements to a strict 'least restrictive means' analysis"). Indeed, there is irony in the ABA's raising this issue. Disclaimers have generally been suggested as a *less* restrictive alternative to measures that limit commercial speech. *See, e.g., Peel v. Att'y Registration & Disciplinary Comm'n of Illinois*, 496 U.S. 91, 110 (1990); *In re R.M.J.*, 455 U.S. 191, 201-203 (1982).

(3) <u>The Ordinance is not paternalistic.</u> Characterizing the Ordinance as "paternalistic," Amicus Br. of Ass'n of Nat'l Advertisers at 8, is equally ironic. Speech regulations are

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[135] The *AMI* majority left the question undecided. *AMI*, 760 F.3d at 23.

"paternalistic" when they "seek to keep people in the dark for what the government believes to be their own good." *Rubin v. Coors Brewing Co.*, 514 U.S. 476, 497 (1995) (Stevens, J., conc. in judgment). Here it is the soda manufacturers who seek to keep people in the dark (for the good of the soda manufacturers). Moreover, the information which the city seeks to make available is expressly desired by consumers[136] – just the opposite of paternalistic regulation.

CONCLUSION

Because the Ordinance requires only that factual and uncontroversial commercial information be provided to San Francisco residents, and because that information relates to vitally important decisions residents make about their health, the Ordinance readily passes muster under the First Amendment. The motion for a preliminary injunction should be denied.

DATED: February 23, 2016

Respectfully submitted,

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[136] *See* Alexei Koseff, *California Voters Favor Taxes, Labels for Sugary Drinks*, SAC. BEE (Feb. 3, 2016) (Field Poll found that "[s]eventy-eight percent of respondents approved of labeling sugary drinks with a cautionary message, stating that studies show daily consumption contributes to diabetes, obesity and tooth decay"), *at* http://www.sacbee.com/news/politics-government/capitol-alert/article58298533.html

PROOF OF SERVICE

I hereby certify that on February 23, 2016, I caused to be filed electronically via the Court's CM/ECF System, and thereby served on all counsel, a true and correct copy of this Brief of Amici Curiae.

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I declare under penalty of perjury pursuant to the laws of the State of California that the foregoing is true and correct.

Executed February 23, 2016, at San Francisco, California.

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