Deputation of
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Technical Brief to the Ottawa Board of Health
re Agenda item # 4,
Healthy Eating, Active Living: Protecting Vulnerable Populations Through Restrictions in Marketing of Foods And Beverages
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I am the Executive Director of the Centre for Health Science and Law (CHSL) which is the publisher of *Food for Life Report* both of which are headquartered in Ottawa. We educate the public about food and health and advocate stronger public health nutrition policies. CHSL does not accept funding from industry or government.

A. INTRODUCTION

I would like to speak in favour of the Ottawa Board of Health taking action to protect children from the commercial marketing of all products, services and brands, not just specific to, as yet undefined foods. I also want to make some specific comments in relation to energy drinks along the lines of ones I made to the Toronto Board of Health last month and last spring.

Children and teenagers lack the cognitive maturity to interpret commercial advertising. Nutrient-poor foods are not alone in among the products marketing to children that also promote poor health; indeed, most products marketed to children on television (and probably on the Interest), promote sedentary play and leisure activities, such as video games, movies, television programs. Furthermore, most comprehensive legally binding limits on marketing to children in the world (esp., in Quebec, Sweden, Norway, and Brazil) are based on the principle that children are vulnerable to manipulation by marketing. The United Kingdom has a nutrient-based ban on marketing of certain foods target at children under the age of 16. However, several evaluations of it conducted by the UK Government, the World Health Organization, and independent British academics have found a very small benefit, and one study even found a slight rise in exposure of children to such advertising following the implementation of the UK regulation. Importantly, the hope that a market for advertising nutritious foods would be created has not been realized. So much television programing in the UK is already commercial-free for all ages anyway, unlike in Canada (i.e., BBC1, BB2, BBC3 and other channels broadcast commercial-free to children and adults).

Two concepts that recur in the Board of Health, "ultra-processed foods" and "foods high in fat sugar, and salt" are too imprecise about what constitutes a healthy diet. Ultra-processed food is a notion developed in Brazil to single out new, non-traditional foods. In Canada, plenty of healthful foods, such as whole grain bread and cereal are considered nutrition foods for good reasons, but fall into the UPF category. Likewise, fresh pasta made from refined flour is considered unprocessed, but dry pasta from whole grain is disparaged as UPF. In addition, the evidence indicating the rise in ultra-processed foods mostly comes from trends in canning that began in the 1930s and plateaued decades before obesity rates rose in Canada or anywhere in the world. It is much better to focus on the ingredients in food than whether they are processed in a manufacturing plant or at home. And the lion's share of ill-health caused by poor diet relates to inadequate consumption of fruit, vegetables, legumes, nuts, seeds and refined grains, none of which are directly aided by the proposed measures.

When it comes to advertising to children, the world's first and still most comprehensive approach to advertising to children, Quebec's *Consumer Protection Act*, has been tested by the Supreme Court of Canada. In fact, the Supreme Court decision that upheld the Quebec ad ban has become a pillar of Canadian constitutional law, that has been followed, applied and noted with approval by hundreds of courts and appeal courts and repeatedly reinforced by the Supreme Court itself since 1989. Proponents of the food-only ad-ban advocated by Senator Raine have been perhaps too speculative and optimistic about the resilience of that approach against even numerous challenges by food companies, of the sort that toy, tobacco companies, and a host of food companies have deployed repeated in recent years in Canada and the U.S. to undermine public health regulations.

I would also like to underscore the importance of safeguarding children, especially teenage children, from a small risk of very serious acute adverse responses to caffeinated energy drinks. Mayor Watson has become an enthusiastic cheerleader for energy drinks as exemplified by agreeing to host the Red Bull Crashed Ice extreme sport event here in Ottawa earlier last month which even included a junior competition for children as young as 16. In public media comments, Mayor Watson publicly stated that "So I have no concerns about that at all. And I'm a former minister of health promotion. I would tell you if I did."

B. NUTRITION AND MARKETING OF ANY FOOD OR NON-FOOD PRODUCTS TO CHILDREN

Nutrition-related illnesses cause more than 50,000 deaths annually in Canada, largely due to heart disease, stroke, diabetes, and certain cancers caused mainly by consuming too many calories, way too much sodium, trans and saturated fat, and refined sugars, and far too little fruits and vegetables.[1] More than 60% of adults and 25% of school-aged children are overweight or obese.[2] The economic burden of obesity and overweight has been estimated to range from $5 billion to $30 billion annually, all estimates of which are based on some conservative assumptions.[3] In 2015, Health Canada estimated that employees with poor nutritional health are 11% less productive than counterparts who ate a healthy diet which suggests that the potential indirect health benefits of better nutrition in a $2 trillion economy could be in the tens of billions of dollars per year.[4]

I hasten to add that physical inactivity is also a major driver of ill-health even if it likely plays a minor role in the obesity epidemic compared to poor diet. This is important because, by far, most products commercially advertised to children promote sedentary leisure, much more that junk foods. Every major report on obesity published by the Ontario government, federal government, and international authorities concerning obesity prevention have stipulated a causal role of decreased physical activity and a remedial

role for increased physical activity, including reports published by the World Health Organization, World Bank, Organization for Economic Cooperation and Development, World Cancer Research Fund, House of Commons Standing Committee on Health, Senate Standing Committee on Social Affairs, Science and Technology, and the Ontario government's Healthy Kids Panel.[5] The Seattle, Washington-based Institute for Health Metric and Evaluation's disease risk factor calculator estimates that low physical activity causes more than 10,000 deaths per year in Canada. The World Cancer Research Fund's exhaustive review of research on the relationship between diet, physically activity and cancer concluded that physical inactivity directly contributes to colorectal cancer (the second leading cause of cancer death in Canada) and probably breast and endometrial cancers. These points warrant emphasis in the Canadian context because the vast majority of peer-reviewed research has been conducted in the United States and has focused on food advertising and the US regulatory environment.

While the sentiment of restricting marketing of all food to children (as the Senate report and the Stop Marketing to Children coalition propose) is commendable and I generally agree with the so-called "Ottawa Principles", the regulatory reforms that both parties advocate are, in my view, especially vulnerable to constitutional legal challenge (so could be foreseeable steps backward, not steps forward) for at least the following reasons:

- A ban on all foods advertisements targeting children is unprecedented in the world (and therefore not tested in courts or scientific literature as effective),
- A ban on all food advertisement targeting children is logically not supportable by Supreme-Court-of-Canada-endorsed evidence of the vulnerability of children to manipulation by commercial advertising because it exempts all non-food products and services which exemption would be unconscionable if the government believed that those ads also trick children,
- A ban on all foods advertisements targeting children does not appear to be based on a coherent health rationale because, for instance, it prohibits ads for nutritious foods and permits ads for screen-time and other products that hinder healthy development and disease protective lifestyles.

Likewise, the approach of restricting advertising for only nutrient-poor foods that was advocated by the Ontario Healthy Kids Panel and may be proposed by the federal Minister of Health suffers from the first two defects as the Senate Committee/Coalition approach noted above as well as the following defects:

- A ban on nutrient-poor foods does not effectively curb promotions even for ads that most aggressively target children and teens by categorically failing to restrict ads for fast food restaurant "places" (e.g., restaurant mascots or trophy nutritious foods sold as such salads) and sugary soft drinks (e.g., by absolving nearly identical-looking ads for diet drinks or brand logos), which collectively account for as much as 60% of such ads in children and teens according to the US Federal Trade Commission; and
- A ban on nutrient-poor foods requires stipulating complex nutrition standards that are almost certain to partially contradict existing nutrition policies (such as permissible nutrition label claims and *Canada's Food Guide*), potentially fuelling legal challenges to which public food procurement (including school nutrition standards), food tax rules, and reformulations are not as vulnerable.

Accordingly, in my view, these two approaches could foreseeably result in utterly failed efforts to protect children and, in that sense, could be expensive and time consuming delays, not stepping stones toward progress.

Likewise, especially in light of the recent, failed efforts by the New Brunswick, Ontario and Federal governments to regulate flavoured tobacco products (tobacco companies re-sized products to easily skirt weight-based regulations) and menu labelling litigation in New York City, public health advocates like the Ottawa Board of Health should not assume that regulated companies and their industries associations will passively respond to regulatory restrictions. Ensuring proposals are legally defensible and free from loopholes is vital to ensuring the credibility and effectiveness of legislators.

Since 1980, the Quebec *Consumer Protection Act* has specifically prohibited all advertising directed at children under the age of 13 (e.g., TV, Internet, children's festivals, billboards[6]). Parti Quebecois and Liberal governments in Quebec successfully defended the popular law for nearly a decade culminating in a landmark 1989 freedom of expression ruling in which the Supreme Court said that advertising to children is:

> *...per se manipulative. Such advertising aims to promote products by convincing those who will always believe.*[7]

In fact, developmental psychology research, Canadian legal tradition, and the Supreme Court of Canada (in the 1989 *Irwin Toy* decision) concur that children lack the cognitive maturity to properly interpret commercial advertising. As such, advertising to children is simply systematically tricking children on the scale of mass marketing. Media literacy training of children or their parents doesn't work for children and has not been studied on teenagers, making it a poor substitute for forcing companies to behave ethically by directing their advertising to parents instead of children. The same year that the Supreme Court of Canada ruled in *Irwin Toy* v. *Quebe*c, the Government of Canada adopted the *UN Convention on the Rights of the Child*,[8] committing to ensure that policy and legislation prioritize the best interests of children (up to age 18) over other interests. Since then, four expert literature reviews have shown that the scientific justification for limiting marketing to children has become even more compelling.[9] The federal *Competition Act* and *Food and Drugs Act* prohibit misleading and deceptive advertising. Though neither statute expressly limits marketing to children, *per se*, section 9(1) of the *Competition Act* stipulates that a resident of Canada must be at least 18 years old to officially complain about a misleading or deceptive ad.

In the 1990s, Norway enacted legislation like Quebec's, and Sweden banned TV advertising to children under 12.[10] The United Kingdom restricts television ads directed at children under 16 for foods that are high in fat, sugar and salt—an outdated approach to nutrition standards in not focusing on reducing saturated and trans fats, and not focusing on reducing "free sugars". Evaluations of the U.K. regulation indicate that it led only to a reduction from 4-in-5 food ads seen by children being for foods that are high in fat sugar and salt (HFSS) to 3-in-5.[11] And, a more recent review by the World Health Organization's European Office found that, while spending on HFSS ads targeting children declined over the period 2008-2012, the volume of children's exposures to advertising actually rose during that period,[12] again indicating that regulators should anticipate marketers' next moves to best protect children. Also importantly, the UK's main public television broadcasters (BBC1, BBC2, BBC3, etc.) have remained advertising-free for children and adults for decades. The narrower nutrient-based children's advertising ban was an effort to deal with new specialty private television channels.

While the Government of Ontario has not taken any action to address advertising to children since Deputy Premier Minister of Health Deb Matthews, when she was Minister of Health, in 2013 sought "advice on how to reduce the marketing of unhealthy food and beverages aimed at kids" in a consultation that was convened by an advertising firm, FleishmanHillard that serves the food industry. The fall 2013 invitation-only consultation never produced the consultation report promised.

It is important for the Ottawa Board of Health to advocate a clear message about effective public health nutrition law reform in Canada as provincial and federal governments still espouse reforms that could needlessly and foreseeably bring us back to the drawing board in a few years.

C. ENERGY DRINKS

I am concerned about the adverse health effects of so-called caffeinated energy drinks and believe that federal and other levels of government are not doing enough to curb this risk. These drinks are in some respects, merely sugar water with added mildly addictive stimulants and, as such, provide no health benefits while contributing to dental carries and obesity. I want to stress the still poorly understood possibility that ingredients included in many or all so-called energy drinks pose a risk of severe acute harm to a small sub-population of people that are vulnerable to that risk, but who have no way of recognizing that vulnerability until they actually experience the adverse health events. Consider the following factors:

1. **Reports of suspected cardiac risk to teenagers exceed those of all over-the-counter medicines, combined:** According to reports from Health Canada's Adverse Reaction Database for children aged 12-25, energy drinks were suspected of causing approximately the same number of serious cardiac events (10) as all over-the-counter medicines, combined. However, many of those over-the-counter medicine cases also involved intentional overdoses or prescription medicines as well and were consumed by people who were already sick. All other adverse reactions reported in the database related to prescription drugs or illegal, unregulated drugs or drug abuse. Of the 112 cardiac disorder events leading to death in this age range, 2 involved energy drinks and all but one of the others involved prescription medicine given to sick people under the care of a physician or illegal, unregulated street drugs

2. **Energy drinks were suspected in 24 reports of serious adverse health effects in all ages during the past decade:** Adverse Reaction Database, since this time in 2006 there were 24 reports of serious adverse reactions to energy drinks, including 3 deaths and a host of worrisome cardiac events (including stroke, heart attack, cardio-respiratory arrest, and heart arrhythmia), as well as several seizures/convulsions and other brain-related impacts, (e.g., delusions, amnesia, etc.). Health Canada defines a serious adverse reaction as a one that "requires in-patient hospitalization…causes congenital malformation, results in persistent or significant disability or incapacity, is life-threatening or results in death…" However, in its 2013 review of these adverse reactions, Health Canada surprisingly dismissed these reports and indicated, for example, that "2 deaths that were associated with energy drinks could not be assessed because of lack of information" but did not explain what efforts were made to find the information or the considerations in deciding to ignore such obviously very worrisome reports.

3. **Actual prevalence of adverse reactions to energy drinks is likely much higher than was publicly reported.** Databases that rely on voluntary reporting—such as poison control and adverse reaction databases are believed to grossly under-estimate health risks. For instance, a U.S.-based hospital emergency room surveillance system, Drug Abuse Warning Network (DAWN), revealed a steep, 14-fold rise in emergency room visits associated with energy drinks during the years 2005-2011: from 1,494 visits in participating hospitals to 20,783.[13] This rise corresponds approximately to the rise in the sales volumes of these drinks in Canada.

4. **The term caffeinated energy drinks may mis-characterize biological mechanism of risk:** In 2010, Health Canada's Expert Panel on Caffeinated Energy Drinks advised the previous

government to call these products "stimulant drug containing drinks" in recognition that they typically have several active ingredients. Health Canada scientists noted in a subsequent article that "long term studies on taurine and glucuronolactone have not been conducted."[14] However, this characterization and all of the recommendations and concerns that flowed from the Expert Panel's analysis were not implemented by Health Canada, a practice that is consistent with the approach that Health Canada took under the political leadership of the previous government in regards to the Trans Fat Task force, Sodium Working Group, and other expert advice.

5. **Energy drink adverse reactions were observed at all ages:** Serious adverse effects occurred throughout the age spectrum from age 8-68, with the average age being 32. Health Canada's 2010 Expert Panel noted that 7 of 32 serious adverse reactions during the period it reviewed involved adolescents.[15]

6. **Energy drinks pose a stand-alone risk:** Of the 29 reports of serious adverse effects of energy drinks in Canada 1995-2015, 22 involved no alcohol or illegal drugs and presented in what appeared to be healthy subjects with no other medicines. Likewise, according to the US-based DAWN study, 58% of visits involved energy drinks alone (i.e., not combined with alcohol or drugs) and cases of adverse reactions out-numbered mis-use/abuse cases by more than two-fold. In other words, this is not just a problem of interactions with other substances.

7. **Health Canada no longer automatically publishes energy drink adverse reactions:** In December 2103,[16] in response to industry pressure, Health Canada changed the regulatory status of energy drinks from "Natural Health Products" (about which adverse reaction reports were required to be automatically published) to foods for which adverse reactions are only disclosed to individuals on application under the *Access to Information Act* upon payment of a fee and are subject to delays that often last months or even years.

8. **Risk and benefits not disclosed to consumers:** Even if there were good evidence that so-called energy drinks offered cognitive or athletic performance advantages (which there is not), it is unscrupulous to promote them while the pre-disposing risk factors for severe acute harm and death are not well understood, not acknowledged by manufacturers,[17] and not quantitative for prospective customers. If caffeinated energy drinks were classified as "novel foods" when they were first introduced into the marketplace—rather than the weakly regulated Natural Health Products—they might not have been approved at all. Currently, many ingredients now used in energy drinks (e.g., taurine) are *not* permitted for use in any other foods.

9. **Dietitians of Canada Position:** In its written submission to the Toronto Board of Health last month, Dietitians of Canada stated "we do not support consumption of [caffeinated energy drinks (CEDs), given the potential for unwanted health effects from excessive intakes of caffeine, sugar and other ingredients in these products. In our view, there is no public health rationale to support the availability of CEDs in Canada. DC supported the 2010 recommendations of the Expert Panel…DC has recommended that the cautionary statement, 'Not recommended for…', explicitly name teenagers (in addition to 'children')"

10. **Health Canada has not taken effective action to safeguard Canadians against the risk of acute harm and possible (though rare) sudden death due to energy drink consumption or to adequately investigate the relationship.** Health Canada solicited the advice of an Expert Advisory Group, chaired by the former President of the Canadian Medical Association, and including an international roster of issue experts, but ostensibly ignored all of the Expert Panel's recommendations since it reported its findings in 2010. By contrast, in 2002, after observing 60

adverse reaction reports and one death involving an herbal preparation containing ephedra marketed for weight-loss, Health Canada concluded that these products constituted a "Class 1 Health Risk" for some identified vulnerable population groups. Similarly, Health Canada issued a voluntary recall and stop-sale directive for products containing the herb Kava Kava on August 21, 2002 after receiving reports of four cases of non-fatal liver toxicity in Canada. A "Class 1 Health Risk" is "a situation where there is a reasonable probability that the use of, or exposure to, a product will cause serious adverse health consequences or death." In a December 18, 2016 recall of a product called "Black Orange," Health Canada warned that "Ephedrine and caffeine, when combined, may cause serious and possibly fatal adverse effects. Ephedrine taken in combination with caffeine can cause symptoms ranging from dizziness, tremors, headaches and irregularities in heart rate to seizures, psychosis, heart attacks and stroke." The constellations of adverse effects for this product is similar to the reported effects of energy drinks.[18]

D. RECOMMENDATIONS

The City of Ottawa may be somewhat limited in its constitutional capacity to control the manufacture, marketing, and sale of products that are subject mainly to federal and provincial government law. However, the Medical Officer of Health for Ottawa and Board of Health are potentially important opinion leaders in the broader public health community and could help spur decisions to generate evidence that might persuade Health Canada and provincial counterparts to take transformative actions to safeguarding the public, especially children, from the risk of severe acute harm and death from so-called caffeinated energy drinks.

In addition to prohibiting the sale or marketing of energy drinks in City-controlled facilities (which we strongly support), the Board could authorize the Medical Officer of Health to:

1. **Urge adverse reaction reporting:** Alert the Provincial Chief Coroner and medical practitioners in Ottawa that Ottawa Public Health has detected a signal and propose the inclusion of a question regarding the ingestion of stimulant drug containing drinks when data is being collected systematically on cases and publicly report these at the earliest opportunity.

2. **Help launch a year-long sentinel study with the Ottawa Heart Institute:** Undertake a sentinel study in collaboration with an Ottawa-area hospital with an emergency, cardiology and pediatric departments to include a question about the consumption of so-called caffeinated energy drinks, and blood tests for levels of caffeine and possibly other energy drink additives for patients exhibiting acute illness, including but not limited to cardiac distress, convulsions, unexplained death, drivers in all vehicle accidents, and other relevant circumstances. It is, of course, vital to ensure that such study not be done in partnership with energy drink manufacturers, bottlers or retailers.

3. **Urge the federal Minister of Health to ensure better coherence and concordance between evidence and regulatory approach concerning energy drinks:** Authorize the Medical Officer of Health to write a letter to the federal Minister of Health Dr. Jane Philpott urging her to:

a) reinstate automatic disclosure of energy drink reports in the Adverse Reaction Database, and

b) explain the rationale for Health Canada accepting and/or supporting a Canadian Beverage Association voluntary commitment that its members will refrain from marketing to children under the age of 12, even though Health Canada's own staff scientists concluded that "for

adolescents the likelihood of a Health risk is greater [than for children or adults]… given that energy drinks tend to be marketed to adolescents who (unlike children) are capable of accessing these products, including the larger volumes, but may be less likely than adults to adhere to consumption recommendations."[19]

4. **Urge the Federal Minister of Health and Senator Raine to support efforts to emulate the Charter-tested Quebec approach to restricting marketing to children**, rather than hazard an attempt at a novel approach to limiting only some types of food ads using an approach that is vulnerable to legal challenge and is categorically prone to brand advertising and restaurant advertising that is uniquely permeable to the two most intensive forms of advertising targeted to children and teens, soft drinks and fast food restaurants. The UK government's limits on marketing products to children that are high in fat, sugar and salt, for instance, allow the marketing of sugar-free Red Bull. Extending the Quebec approach to the rest of Canada is likely to be a more effective public health measure (especially if it is extended to all children up to age 19 or at least 18 as specified in the Ontario *Age of Majority Act*) and is more defensible, constitutionally, against legal challenge.

As closing comment, I would observe that considering the Ontario government announced plans to restrict marketing to children nearly four years ago but seemingly foiled its own efforts by commissioning two advertising agencies for approximately $80,000 to oversee an invitation-only consultation process which never generated the promised report or any policy change. Under the circumstances, it is likely unwise to devote valuable time and energy urging action by the Government of Ontario on either marketing to children or energy drinks.

Respectfully submitted on behalf of the Centre for Health Science and Law by Bill Jeffery.

References

[1] See the Seattle, Washington-based Institute for Health Metrics and Evaluation's disease risk factor calculator, the Global Burden of Disease report, which uses country data compiled by the World Health Organization, to estimate, e.g., that approximately 51,000 deaths in Canada in the year 2013 were due to dietary risks: http://vizhub.healthdata.org/gbd-compare/ Also, World Health Organization. *Global Health Risks: Mortality and burden of disease attributable to selected major risks*. 2009. W.H.O. Geneva. See, esp. p. 17. Available at: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf
Statistics Canada. *Mortality, Summary List of Causes, 2008*. 2011. Ottawa. Catalogue no. 84F0209X which indicates the total number of deaths in 2008 was 238,617, 20% of which is: 47,723. Available at: http://www.statcan.gc.ca/pub/84f0209x/84f0209x2008000-eng.pdf

[2] Based on an average of measured obesity and overweight from surveys conducted in 2008 and 2007-2009 reported in Shields M, Gorber SC, et al. "Bias in self-reported estimates of obesity in Canadian health surveys: An update on correction equations for adults." Statistics Canada, Catalogue no. 82-003-XPE *Health Reports*, 2011 Vol. 22(3) 2011 at Table 4. Available at: http://www.statcan.gc.ca/pub/82-003-x/2011003/article/11533-eng.pdf For children, see: Component of Statistics Canada Catalogue no. 82-625-X no. 2010001. Health Fact Sheets. Body Mass Index (BMI) for Children and Youth 2007 to 2009. Available at: http://www.statcan.gc.ca/pub/82-625-x/2010001/article/11090-eng.pdf

[3] Public Health Agency of Canada. *Obesity in Canada*. 2010. Ottawa at 28-29. Available at: http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/oic-oac/assets/pdf/oic-oac-eng.pdf Anis AH, Zhang W, et al. Obesity and overweight in Canada: An updated cost-of-illness study. *Obesity Reviews.* 2009;11(1):31-40. Behan DF, Cox SH, et al., *supra,* which estimated the cost of overweight and obesity in Canada at $30 billion annually, assumed a 13% rate of hypertension, but figures published in 2011 indicate that 23% is more accurate. See: Robitaille C, Dai S, et al. Diagnosed hypertension in Canada: incidence, prevalence and associated mortality. *Canadian Medical Association Journal*. 2012;184(1):E49-E56 at E51.

[4] *Canada Gazette, Part I*, Vol. 149, No. 24. Saturday June 13, 2015 on pages 1192-1265 at p. 1203: http://www.canadagazette.gc.ca/rp-pr/p1/2015/2015-06-13/pdf/g1-14924.pdf

[5] See, for instance:

[6] The Quebec *Consumer Protection Act* has protected Quebec children against such marketing since 1980. *Attorney General of Québec* v. *Irwin Toy, Ltd*., [1989] 1 *Supreme Court Reports* 927 at 988-9 held that advertising to children is: "…*per se* manipulative. Such advertising aims to promote products by convincing those who will always believe."

[7] *Attorney General of Québec* v. *Irwin Toy, Ltd*., [1989] 1 *Supreme Court Reports* 927 at 988-9. See also: Bill Jeffery, "The Supreme Court of Canada's Appraisal of the 1980 Ban of Advertising to Children in Quebec: Implications for "Misleading" Advertising Elsewhere." 39 *Loyola of Los Angeles Law Review* 237-276 (2006).

[8] United Nations Convention on the Rights of the Child**.** Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of 20 November 1989**.** Available at: http://www.canadiancrc.com/UN_CRC/UN_Convention_on_the_Rights_of_the_Child.aspx

[9] See, for instance, three comprehensive expert literature reviews: Gerald Hastings et al., Centre for Social Marketing. University of Strathclyde & Food Standards Agency. *Review of Research on The Effects of Food Promotion to Children* (2003). London, United Kingdom, available at: http://www.food.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf ; Institute of Medicine of the National Academies of Sciences. *Food Marketing to Children and Youth: Threat or Opportunity* (J. Michael McGinnis, et al., ed.) 2006. Washington, D.C.; American Psychological Association. *Report of the APA Task Force on Advertising and Children* (Brian Wilcox, Chair). 2004. Washington, D.C., available on at: http://www.apa.org/pi/families/resources/advertising-children.pdf ; and World Cancer Research Fund. *Policy and Action for Cancer Prevention— Food, Nutrition, and Physical Activity: a Global Perspective*. 2009. Washington, D.C., available via http://www.dietandcancerreport.org/

[10] Hawkes, C. (Ed.). (2004). *Marketing food to children: The global regulatory environment.* Geneva: World Health Organization. Retrieved from http://whqlibdoc.who.int/publications/2004/9241591579.pdf2004b

[11] United Kingdom Office of Communications. *HFSS advertising restrictions. Final review*. 2010 at 32. Available on-line at: http://stakeholders.ofcom.org.uk/binaries/research/tv-research/hfss-review-final.pdf

[12] WHO Regional Office for Europe. *Marketing of foods high in fat, salt and sugar to children: update 2012–2013.* 2013 at 22 and 24. Available at: http://www.euro.who.int/__data/assets/pdf_file/0019/191125/e96859.pdf

[13] Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. The *DAWN Report: Update on Emergency Department Visits Involving Energy Drinks: A Continuing Public Health Concern.* January 10, 2013. Rockville, MD. Available at: http://archive.samhsa.gov/data/2k13/DAWN126/sr126-energy-drinks-use.pdf

[14] J Rotstein, J Barber, C Strowbridge, S Hayward, R Huang, and SB Godefroy. Energy Drinks: An Assessment of the Potential Health Risks in the Canadian Context. *International Food Risk Analysis Journal*. Vol. 3(4) 2013.
[15] Macdonald N, Hamilton R, Malloy P, Moride Y, Shearer J. *Report by the Expert Panel on Caffeinated Energy Drinks.* Nov 10, 2010. Ottawa. Health Canada. Available at: http://www.hc-sc.gc.ca/dhp-mps/alt_formats/pdf/prodnatur/activit/groupe-expert-panel/report_rapport-eng.pdf
[16] Health Canada. Caffeinated Energy Drinks. http://www.hc-sc.gc.ca/fn-an/prodnatur/caf-drink-boissons-eng.php
[17] Canadian Beverage Association infographic "Energy Drinks Canadian Facts and Information": http://www.canadianbeverage.ca/wp-content/uploads/2016/01/CBA-EnergyDrinks-Handout-EN_1A.pdf
[18] See Health Canada's recall notice "Unauthorized product "Black Orange" seized from Keebo Sports Supplements in Regina may pose serious health risks," available at: http://healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2016/60166a-eng.php?_ga=1.48454755.493377785.1489872089
[19] J Rotstein, J Barber, C Strowbridge, S Hayward1, R Huang1 and SB Godefroy. Energy Drinks: An Assessment of the Potential Health Risks in the Canadian Context. Int. Food Risk Analysis Journal Vol. 3(4) 2013. Importantly, however, Health Canada written paper was published in a now defunct journal[19] based in Croatia that an investigation by the Ottawa Citizen revealed had extremely low standards for review and publication of submissions.[19]

Importantly, the weak public policy recommendations set out by Health Canada scientists in that paper departed sharply from the recommendations made by Health Canada's external Expert Panel on Caffeinated Energy Drinks three years earlier and summarily dismissed as irrelevant dozens of adverse reactions. The way the authors handled evidence in these two important respects would likely have been difficult to publish in a truly peer-reviewed scientific journal. See: Tom Spears. The Very Odd Tale of Health Canada's Croatian Publication. *Ottawa Citizen* Oct 30, 2014. Available at: http://ottawacitizen.com/technology/science/the-very-odd-tale-of-health-canadas-croatian-publication