The Honorable Beth M. Andrus
Trial Date: August 22, 2016

STATE OF WASHINGTON
KING COUNTY SUPERIOR COURT

STATE OF WASHINGTON, Plaintiff, v. LIVING ESSENTIALS, LLC, a Michigan limited liability company, and INNOVATION VENTURES, LLC, a Michigan limited liability company, Defendants.	NO. 14-2-19684-9 SEA **COURT'S MEMORANDUM DECISION**

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MEMORANDUM DECISION

A. INTRODUCTION

Plaintiff State of Washington ("the State") filed this lawsuit against Defendants Living Essentials, LLC and Innovation Ventures, LLC (referred to jointly as "Living Essentials"), seeking injunctive and declaratory relief under the Consumer Protection Act ("CPA"), RCW ch. 19.86 for alleged deceptive or unfair promotional claims about its 5-hour ENERGY® products.

The Court tried the case from August 22, 2016 to September 8, 2016. The State appeared through counsel, Kimberlee Gunning and Daniel Davies, Assistant Attorneys General, and Elizabeth Erwin and Trisha McArdle, Senior Counsel. Living Essentials appeared through its attorneys, Joel Mullin, Reilley Keating, Timothy Snider, Jill Bowman, Taryn Williams, and Samantha Sondag, from the law firm of Stoel Rives.

The Court heard testimony from Anthony Pratkanis, PhD, Troy Giezentanner, Edward R. Blonz, PhD, Daniel To, Thomas McLellan, PhD, Chad W. Crummer, Carl Sperber, David Kennedy, PhD, Jay Sickler, CPA, Sanford W. Bigelow, PhD, and J. Howard Beales III, PhD. The Court additionally reviewed portions of transcripts and videos portions of the depositions of Carl Sperber, Joseph P. Hennessy, James M. Blum, PhD, Jay Sanjay Udani, MD, Michael Glade, PhD, Marilyn Barrett, PhD, Lynn Petersmarck, Thomas Maronick, and Keith Wesnes, PhD. The Court admitted approximately 500 exhibits.

B. ISSUES

1. Did Living Essentials violate the CPA by making deceptive and/or unfair representations in marketing and promotional materials that the non-caffeine ingredients in its Original, Extra Strength and Decaf 5-Hour ENERGY® provide energy, alertness and focus (the Vitamins Claim)?

2. Did Living Essentials violate the CPA by making deceptive and/or unfair representations in marketing and promotional materials that the effects of Original and Extra Strength 5-Hour ENERGY® are superior to consuming the equivalent amount of coffee and other sources of caffeine (the Superior to Coffee Claim)?

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3. Did Living Essentials violate the CPA by making deceptive and/or unfair representations in marketing and promotional materials that Decaf 5-Hour ENERGY® provides energy, alertness and focus (the Decaf Claim)?

4. Did Living Essentials violate the CPA by making deceptive and/or unfair representations in marketing and promotional materials that consumers will not experience a "crash" after drinking 5-Hour ENERGY® (the Crash Claim)?

5. Did Living Essentials violate the CPA by making deceptive and/or unfair representations in its "Ask Your Doctor" advertising campaign by implying that doctors recommended the use of 5-Hour ENERGY® (the Ask Your Doctor Claim)?

C. SUMMARY OF DECISION

1. The State failed to prove that Living Essentials violated the Consumer Protection Act when it aired or published ads that indicated that the non-caffeine ingredients in 5-Hour ENERGY® promote energy, alertness and focus.

2. Living Essentials violated the Consumer Protection Act when it aired or published ads that represented that the energy, alertness and focus from 5-Hour ENERGY® lasts longer than a cup of coffee because of the synergistic or interactive effects of caffeine, B vitamins and nutrients in the product.

3. Living Essentials violated the Consumer Protection Act when claimed in a press release and on its web site that Decaf 5-Hour ENERGY® will provide energy, alertness and focus that lasts for hours.

4. The State failed to prove that Living Essentials violated the Consumer Protection Act when it aired or published its "no crash" ads.

5. Living Essentials violated the Consumer Protection Act when it aired the Ask Your Doctor ads.

D. FINDINGS OF FACT

1. Procedural History

This case arose out of a 2012 multi-state consumer protection investigation of Living Essentials' advertising and marketing practices. On July 17, 2014, the State filed this CPA enforcement action pursuant to its enforcement authority under RCW 19.86.020; RCW 19.86.110; and RCW 19.86.080. (Dkt. #1).[1] On July 23, 2015, the State filed a Second Amended Complaint

[1] The State's original complaint included a sixth claim for relief, which the Court dismissed pretrial. (Dkt. #23).

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for Injunctive and Other Relief removing the dismissed claim but pursuing the five claims outlined above. (Ex. 662). Living Essentials answered the Second Amended Complaint on July 31, 2015, denying any CPA violations. (Ex. 663).

2. Living Essentials' Dietary Supplement Products

Living Essentials is a privately-held limited liability company organized under the laws of the State of Michigan, with its principal place of business in Farmington Hills, Michigan. Living Essentials manufactures, markets, and sells a liquid dietary supplement, 5-Hour ENERGY® nationwide, including in Washington. It introduced Original 5-Hour ENERGY® in 2004, and added an Extra Strength and Decaf variety in 2007.

The 5-Hour ENERGY® products, sold in 2 ounce bottles, contain the following ingredients:

Ingredient	**5-Hour ENERGY® Original**	**5-Hour ENERGY® Extra Strength**	**5-Hour ENERGY® Decaf**
B-3 (Niacin)	30 mg	40 mg	--
B-6	40 mg	40 mg	40 mg
Folic Acid	400 mcg	400 mcg	400 mcg
B-12	500 mcg	500 mcg	500 mcg
Sodium	18 mg	18 mg	18 mg
Taurine	467 mg	529 mg	483 mg
Glucuronolactone	411 mg	379 mg	346 mg
Malic acid	273 mg	320 mg	292 mg
N-Acetyl-L-tyrosine	271 mg	260 mg	237 mg
L-Phenylalanine	229 mg	260 mg	237 mg
Caffeine	200 mg	230 mg	6 mg
Citicoline	19 mg	22 mg	--
Choline Bitartrate	--	--	408 mg

5-Hour ENERGY® is marketed as a "dietary supplement." Under the Dietary Supplement Health and Education Act of 1994 ("DSHEA"), a dietary supplement is a product intended to be ingested to supplement the diet and contains one of several statutorily defined ingredients: a vitamin, a mineral, an herb or botanical, or an amino acid. 21 U.S.C. §321(ff).

3. The Nutritional Science

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The Court heard extensive scientific evidence regarding the ingredients in 5-Hour ENERGY® and their effects on or function within the human body. The following is a summary of the evidence.

a. B Vitamins in General

Living Essential print ads state:

> **Vitamins B6, B12, and B3 (Niacin):** Play a key role in the production of amino acids, the building blocks of protein and aid[] in the processing of carbohydrates for energy. (Ex. 653).

The State does not dispute this description of the role B vitamins play in human bodies.

The State's nutritional expert, Dr. Edward Blonz, and Living Essential's expert, Dr. David Kennedy, agree that B vitamins are essential to metabolism (cellular generation of physiological energy) within the human body. B vitamins prevent the creation of destructive compounds (known as "free radicals") in the body and contribute to the synthesis of important molecules in the body that drive cerebral blood flow to the brain. Humans need B vitamins to turn amino acids such as L-tyrosine into neurotransmitters used in cognitive functioning. Fatigue is a classic symptom of a B vitamin deficiency. Drs. Blonz and Kennedy agree that there is consensus within the scientific community that the intake of B vitamins from one's diet can reduce tiredness and fatigue.

(i) Niacin (B_3)

Niacin, or vitamin B_3, is an essential nutrient that plays a role in producing co-enzymes involved in energy release. It is quickly absorbed in the stomach and duodenum. Dr. Blonz testified credibly that healthy, well-nourished adults, in general, typically obtain the daily recommended requirement of vitamin B_3 from the foods they consume each day. Dr. Kennedy testified credibly that a niacin deficiency can cause weakness, mood disorders, cognitive problems, personality irritability, and, in extreme cases, psychosis.

5-Hour ENERGY® Original's 30 milligrams of niacin is 150 percent of the minimum amount humans need to consume on a daily basis for healthy physiological functioning. The 40

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mg in the Extra Strength formula is 20 times the daily required amount. There is no niacin in the 5-Hour ENERGY® Decaf.

(ii) Vitamin B_6

Vitamin B_6, like niacin, is involved in energy release and protein synthesis. The vitamin contributes to the reduction of tiredness and fatigue. Deficiency levels of vitamin B_6 are in the range of 10.5 percent of the U.S. adult population. According to Dr. Kennedy, a deficiency of B_6 can cause mood disorders, cognitive problems, personality irritability, and in extreme cases, seizures and convulsions.

(iii) Folic Acid (Vitamin B_9)

Folic acid, also known as folate, is a B vitamin essential for the body to metabolize amino acids and to create tissue within the body. Folate, which is found in leafy green vegetables, fruits, dried beans, and peas (Ex. 653), is important for healthy cardiovascular function (blood flow) and can contribute to the reduction of fatigue and tiredness. If ingested with food, it is absorbed by the body in three to four hours. If ingested on an empty stomach, it can be absorbed by the body within an hour. There is some scientific support that a single dose of this vitamin can improve blood flow. 5-Hour ENERGY®'s 400 mg of folic acid constitutes 100 percent of the recommended daily value of B_9 needed to maintain one's health.

(iv) Vitamin B_{12}

Vitamin B_{12} is another essential nutrient that works with folic acid in a number of biosynthetic processes. This vitamin, which is found in meat or animal products, such as eggs, contributes to normal energy metabolism and to the reduction of tiredness and fatigue. 5-Hour ENERGY® has 83 times the daily amount of B_{12} needed in healthy adults.

At trial, Dr. Kennedy agreed with Dr. McLellan that there is no experimental evidence showing that the addition of B vitamins to a caffeinated energy drink will cause greater improvement in physical and cognitive performance than can be attributed to the effects of caffeine alone.

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b. Amino Acids

(i) Taurine

Taurine is a micronutrient involved in several cellular and physiological functions. Although humans require several hundred milligrams per day of the micronutrient, it is created by the body and people get the rest of the taurine they need from their diet. Taurine can effect endothelial function (blood flow) and can have an effect on one's cognitive function and mood. The experts at trial agreed that there is inconsistent or limited quality experimental evidence indicating that the addition of taurine to a caffeinated energy drink will cause greater improvement in physical and cognitive performance than can be attributed to the effects of caffeine alone.

(ii) Glucuronolactone

Glucuronolactone is a naturally occurring byproduct of metabolism of glucose in the liver. The experts at trial agreed that there is no experimental evidence showing that the addition of glucuronolactone to an energy drink will cause greater improvement in physical and cognitive performance than can be attributed to the effects of caffeine alone.

(iii) Malic acid

Ex. 653, one of Living Essentials' print ads, described malic acid as follows: "the body synthesizes Malic Acid during the process of converting carbohydrates to energy. The main food source of Malic Acid is fruits." There was no other evidence presented by either party at trial regarding this ingredient.

(iv) N-Acetyl-L-tyrosine and L-Phenylalanine

L-Phenylalanine is an essential nutrient derived from a person's diet. It generates the non-essential nutrient L-tyrosine that in turn is converted into neurotransmitters in the brain. L-tryrosine supplementation can contribute to the creation of neurotransmitters depleted by stress. There have been some studies that indicate that low doses of L-tryosine can improve cognitive functioning. According to Living Essentials' print ads, "tyrosine" is an amino acid that transmits nerve impulses to the brain and is found in meat, dairy, fish, and grains. Ex. 653.

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c. Caffeine

Caffeine is a chemical compound, found in coffee and tea plants. It acts as a stimulant to the central nervous system. When it is absorbed by the body, it binds to adenosine receptors. These receptors are situated throughout the body in both the tissue and central nervous system in the brain. As a person requires energy, that person's body will produce adenosine. In the brain, adenosine inhibits the release of neurotransmitters, such as dopamine, adrenaline, serotonin and glutamate. Caffeine antagonizes the effect of adenosine, meaning it causes an increase in the release of neurotransmitters.

Caffeine has been demonstrated to impact cognition and physical performance in humans. The testifying experts agreed, however, that there is little evidence that caffeine improves episodic or long-term memory. Caffeine has a half-life of 3 to 10 hours, meaning the effects of caffeine last for several hours.

d. Citicholine and Choline Bitartrate

Choline is an essential nutrient that works with vitamin B_{12} and folate to contribute to the synthesis of the neurotransmitter, acetylcholine. Citicholine, the nutrient in Original and Extra Strength 5-Hour ENERGY®, is a chemical compound of choline and cytidine. According to Living Essential ads, citicholine is "a water-soluble compound essential for the synthesis of phosphatidyl choline, a constituent of brain tissue. Citicholine plays a role in neurotransmission and can help support brain tissue." (Ex. 653). Citicholine has been shown to improve memory in elderly participants with cognitive decline.

Choline bitartrate is a chemical compound of tartaric acid and choline. Large doses of choline bitartrate (2 grams) have been shown to improve performance on visuomotor tasks but slow reaction times. Because a fraction of choline bitartrate is choline, Dr. Blonz estimated that Decaf 5-Hour ENERGY® contains 167 mg of choline.

The Food and Nutrition Board of the Institute of Medicine recommends that male adults consume 550 mg and female adults consume 425 mg of choline per day.

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4. Living Essentials' Ad Claims

In 2004, Living Essentials first began to manufacture and sell the 2 ounce non-carbonated 5-Hour ENERGY® "shot." The competition at the time included Red Bull, Monster, AMP, Full Throttle, and Rock Star, and they were all sweet, carbonated energy drinks that were marketed towards teens. Living Essentials decided to market its product to working adults, rather than teens, and to focus on the health aspects of the product.

Living Essentials began running advertisements in 2005 and television ads in 2006. It has continued to air ads on television and cable channels across the country, including in the State of Washington to the present. Initially, the company sought to educate consumers about the benefits of its product over the competition: the small 2 ounce bottle made 5-Hour ENERGY® much more convenient than large soda-can sized drinks, and the product contained no sugar and only 4 calories. The company's initial ads focused on these educational themes.

a. The Vitamins Claims

Living Essentials has aired and published several ads that make claims regarding the role the non-caffeine ingredients play in 5-Hour ENERGY®. Living Essentials has never denied that its product contains caffeine but it has expressly stated that 5-Hour ENERGY®'s non-caffeine ingredients are the product's "key" ingredients in the creation of energy, alertness, and focus. The company has chosen to promote 5-Hour ENERGY®'s B vitamins and nutrients as the reason the product is so effective.

Carl Sperber, the company's director of advertising, developed the tag lines "B Vitamins for Energy; Amino Acids Focus & Better Mood," that appeared in early Living Essentials' television ads (Ex. 2005) for this purpose:

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See also Ex. 2129 (Living Essentials' print ad claimed that 5-Hour ENERGY® "contains a powerful blend of B-vitamins *formulated* for energy and alertness.") In the print ad (Ex. 653), entitled "The Ten Reasons to Trust 5Hour Energy," Living Essentials provided a detailed description of its "key ingredients" and described why they were beneficial:

Vitamins B6, B12 & B3 (Niacin): Play a key role in the production of amino acids, the building blocks of protein and aids in the processing of carbohydrates for energy.

Folic Acid (Vitamin B9): Helps produce and maintain new cells in our bodies. Food sources of folate include leafy green vegetables, fruits, dried beans and peas.

Citicoline: Citicoline is a water-soluble compound essential for the synthesis of phosphatidyl choline, a constituent of brain tissue. Citicoline plays a role in neurotransmission and can help support brain function.†

Tyrosine: An amino acid that transmits nerve impulses to the brain. It is present in meat, dairy, fish and grains.

Phenylalanine: An essential amino acid that enhances alertness.† It's found in dairy products, avocados, legumes, nuts, leafy vegetables, whole grains, poultry and fish.

Taurine: A naturally occurring chemical substance present in meat, fish and dairy products. It plays a role in digestion, and the integrity of cell membranes.†

Malic Acid: The body synthesizes Malic Acid during the process of converting carbohydrates to energy. The main food source of Malic Acid are fruits.

Glucuronolactone: A natural metabolite found in the human body. It has been shown to reduce sleepiness.†

Caffeine*: Provides a boost of energy and feeling of heightened alertness.† Do you avoid caffeine? Then try Decaf 5-hour ENERGY.®

Other Ingredients: Purified Water, Natural and Artificial Flavors; Sucralose; Potassium Sorbate, Sodium Benzoate and EDTA (to protect freshness).

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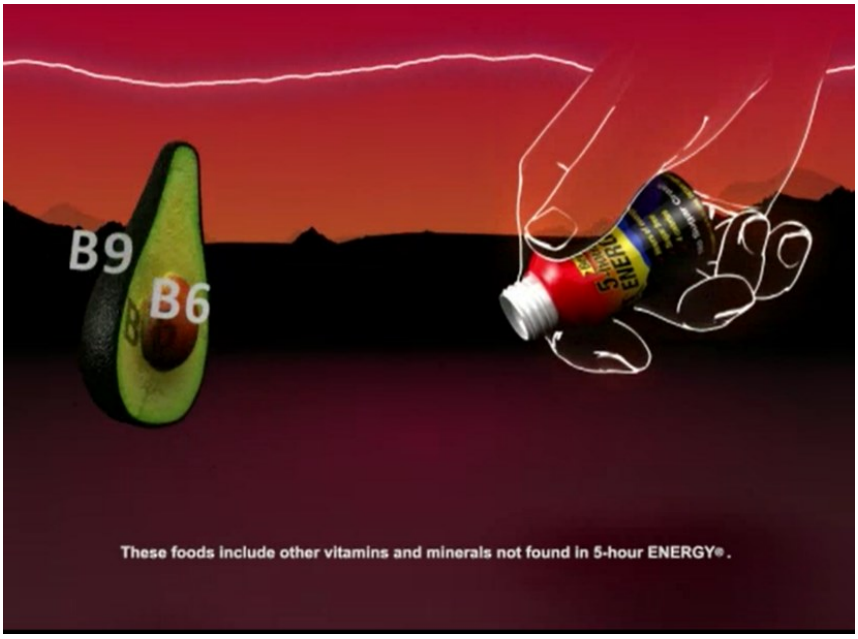
In Ex. 382, the Lots of Reasons ad, the narrator describes 5-Hour ENERGY®'s "key ingredients" or the "beneficial ingredients" as those that "are found in every day food like avocados, broccoli and bananas, or already in you." The animation depicts an avocado, a floret of broccoli and a banana emerging from the 5-Hour ENERGY® bottle. (Similar statements about the product's key ingredients are made in Ex. 648, the Diner ad, and in the print ad, Ten Reasons to Trust 5 Hour Energy, Ex. 653). Ex. 630 and 633, the Coffee and Vitamins ads from March 2013, use the same animation and script as Ex. 382, but when the avocado emerges from the bottle, the words "B_9" and "B_6" appear:



When the broccoli emerges, the word "niacin" appears; when the banana emerges, the word "tyrosine" appears:

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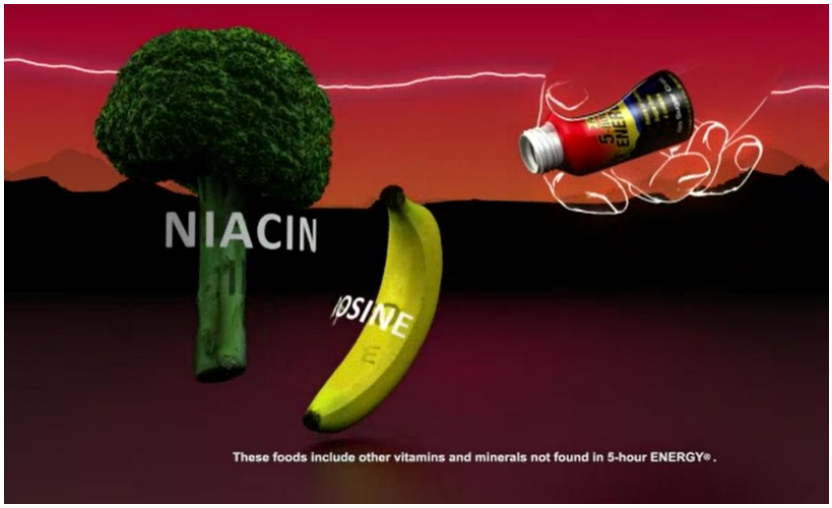

The end tag line is "It's like coffee with vitamins and nutrients. Put them together and it's a great combination."

Living Essentials' ads expressly represent that the vitamins and nutrients in 5-Hour ENERGY® play a role in providing energy, alertness and focus.

b. The Superior to Coffee Claims

Living Essentials' ads also expressly claim that the key vitamins and nutrients work synergistically with caffeine to make the biochemical or physiological effects last longer than caffeine alone. The claims are well summarized in a 2012 press release from Living Essentials (Ex. 113):

> "In today's society we often do not have the time to get enough sleep or to maintain a properly balanced diet. While there is no substitute for a healthy diet and lifestyle, 5-Hour Energy provides a synergistic blend of ingredients (within established safe levels) that enable busy adults to manage their energy needs and keep up with their active lives.
>
> "As 5-Hour Energy's Medical Advisor, Kathleen O'Neil-Smith, M.D., points out, '5-Hour Energy's proprietary blend of B vitamins, amino acids and other nutrients, along with caffeine, together play a critical role in providing an extra boost and a sustained feeling of alertness. The body absorbs as much vitamin B as it needs, and discards what is not absorbed.'

Ex. 635, the "Is It Safe?" ad from April 2013, shows a cup of coffee and a bottle of vitamins. The narrator says "It's simple. Caffeine with vitamins and nutrients. It's the *combination* that makes it so great." The print ad, Ex. 640, carries on with this theme: "It delivers a powerful blend of B-

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vitamins (B6, B12, Niacin and Folic Acid), amino acids and caffeine comparable to a cup of the leading premium coffee. These and other ingredients *work in concert* to provide a feeling of alertness and energy *that lasts for hours.*"[2] In the Construction Cowboy ad from May 2012 (Ex. 384), Living Essentials claimed that 5-Hour ENERGY® is "packed with B vitamins and nutrients" to make it last longer than 3 or 4 cups of coffee. The "How Much Coffee" radio ad, Ex. 723, and the "Cup after Cup radio" ad, Ex. 724, made the same claims.

The State argues that Living Essentials downplayed or minimized the effects of caffeine in 5-Hour ENERGY®. This Court does not so find. Living Essentials never misled consumers into believing that the product contained no caffeine. In fact, its web site (Ex. 2116) promoted the benefits of caffeine:

But Living Essentials' ads did make objective claims that the duration of the recognized physiological benefits of caffeine would be extended because of the non-caffeine ingredients in 5-

[2] This print ad contains a disclaimer at the bottom in small print: "Does not provide caloric energy. Not proven to improve physical performance, dexterity, or endurance. *Individual results may vary."

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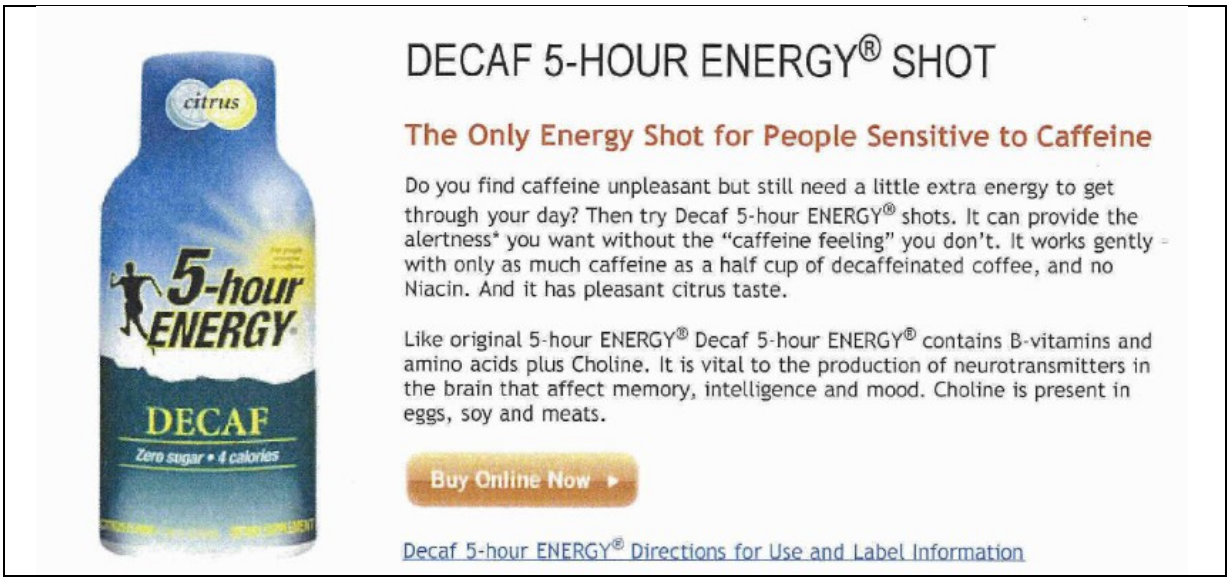
Hour ENERGY®. Living Essentials conveyed that its formula of B-Vitamins and amino acids, *in combination with caffeine*, was superior to coffee because the increase in alertness, fatigue reduction, and improved mental functioning lasts longer than caffeine alone.

c. The Decaf Claims

Living Essentials began to sell a decaffeinated version of 5-Hour ENERGY® in 2008 to appeal to tired, but caffeine-sensitive people. The decaf formula has no niacin and 6 mg of caffeine. The only other difference is the addition of choline bitartrate in lieu of citicoline, although it is not clear why this particular change was made.

Living Essentials has never advertised Decaf 5-hour ENERGY® on television or on the radio. The extent of the marketing materials presented at trial were a press release when the product launched (Ex. 722), a press kit developed by an ad agency for Living Essentials (Ex. 105), screen shots of Living Essentials' website (Ex. 661, 1283, 2118), and the packaging on the Decaf 5-Hour ENERGY® bottle (Ex. 101). In the press release, Sperber stated that the decaf product provides "a sustained energy boost" for people sensitive to caffeine. Living Essentials claimed on its web site that the Decaf 5-Hour ENERGY® "gently" works to provide alertness, which it attributes to the presence of choline in the product:



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The claims in the press release and on the web site are not just claims of subjective "feelings." By linking the physiological benefits of choline with the Decaf product, Living Essentials is implying an objective benefit from drinking Decaf 5-Hour ENERGY®: alertness and sustained energy.

Decaf 5-hour ENERGY® has not been a big seller for Living Essentials, accounting for less than 1% of company sales.

d. The Crash Claims

Sperber testified that he first heard the word "crash" linked to the consumption of sugared, caffeinated energy drinks in a movie starring John Carrey, who in one scene drank multiple cans of an energy drink and in the next scene was seen crashed out on the floor, asleep. Sperber understood that consumers complained that when the sugar and caffeine in energy drinks wore off, they would experience a sudden drop in energy and feel even more tired than before they drank the product. To differentiate 5-Hour ENERGY® from competing energy drinks, he developed an ad campaign revolving around the crash theme:

In the earliest ads, Living Essentials attributed the "crash" effect to the combination of sugar and caffeine:

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Because 5-Hour ENERGY® contains no sugar, Living Essentials believed consumers would not experience a "crash" relating to a drop in glucose levels after consuming the 5-hour ENERGY® products. Living Essentials began to print the "No Crash Later" tag line on the bottle itself.

In 2007, the National Advertising Division ("NAD") of the Better Business Bureau reviewed Living Essentials' promotional claims regarding 5-hour ENERGY®, including the "no crash later" claim. In response to the NAD investigation, Living Essentials indicated that by "crash," it meant "no sugar crash" because 5-Hour ENERGY® has no sugar. The NAD recommended that Living Essentials modify the "no crash" representation to make it clear that the ads meant that 5-Hour ENERGY® would not produce a "sugar crash." Living Essentials modified its advertisements to qualify the "no crash" language by including an asterisk directing consumers to a small print disclaimer saying "No crash means no sugar crash." (Ex. 382, 383, 384, 638, 648, 651, 2129).

Several of Living Essentials' ads continue to claim that 5-Hour ENERGY® will not cause a "crash." *See* Ex. 629 (Parachute Guy says "hours of energy now, no crash later), Ex. 638 (Parachute Guy 2, same tag line), Ex. 651 (Parachute Guy, same tag line), and Ex. 2005 (Why Crash ad).

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e. The Ask Your Doctor Claims

Living Essentials created its "Ask Your Doctor" ("AYD") ad campaign in July 2012. The AYD advertisements (Ex. 649,650) aired for approximately 10 weeks from July 17, 2012 through October 1, 2012. Mr. Sperber's inspiration for the AYD advertisement came from the Trident sugar-free gum campaign, which said that "[f]our out of five dentists surveyed would choose a sugar-free gum for their patients who [chew] gum" and then told consumers to "[a]sk your dentist about Trident." Sperber wanted to replicate this ad and sought to find a way to do so.

To substantiate a claim that doctors would recommend 5-Hour ENERGY for their patients, the company undertook two surveys—an online survey and a paper survey—of primary care physicians. Living Essentials, through counsel, retained Thomas Maronick, Ph.D., a professor of marketing at Towson University in Maryland and the former Director of Impact Evaluation in the Bureau of Consumer Protection at the FTC to create the online survey. Dr. Maronick retained a marketing research and analytical consulting firm (Decision Analyst) to administer the survey to a panel of primary care physicians on its Physician Advisory Council. Dr. Maronick decided on a target of 500 completed questionnaires, which would be sufficiently large to achieve the desired margin of error. A total of 503 physicians completed the survey.

The survey did not ask doctors for their general opinions about energy drinks or whether they would recommend any energy supplement product for their patients. Instead, the questions asked if the doctor would recommend a low calorie, or a low sodium energy drink for their patients who already consumed such products. Not surprisingly, the majority of doctors said "Yes." The results of the online survey indicated that 73.6% of the physicians said they would recommend a low-calorie energy product to their healthy patients who use energy drinks.

The doctors were also shown a 5-Hour ENERGY® label and a brief description of the product. They were then asked if they would recommend 5-Hour ENERGY® to their healthy patients who use energy drinks. The survey results indicated that 47.7% of the physicians would specifically recommend 5-hour ENERGY® to their healthy patients who use energy supplements.

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About 25% of the survey participants responded that they would not recommend 5-hour ENERGY®.

Living Essentials subsequently hired Joe Hennessy, Sales Director for MicroDose, to assist with a paper survey[3] based on questions used in the online survey that Dr. Maronick had designed. Under Hennessy's direction, sales staff would make in-person visits to doctors' offices across the United States to promote 5-Hour ENERGY®. His sales team left samples of the product and brochures describing 5-Hour ENERGY®'s ingredients in these doctors' offices. Living Essential, again through their attorneys at Oakland Law Group, asked Hennessy to have his sales representatives deliver paper copies of the Maronick survey (Ex. 627) to doctors they normally would visit and to ask the doctors to complete the survey. According to Hennessey, he distributed 100,000 copies of the survey to his territorial managers who in turn transmitted copies to the sales representatives. Hennessy was instructed to target 2,500 responses. Dr. Maronick was not involved in the paper survey process and had concerns about whether such a method would suffer from biased responses.

Hennessy received 2,659 paper surveys before the cutoff date. Approximately 90% of the physicians responding to the paper survey indicated they would recommend a low-calorie energy supplement to patients who use energy supplements, and 74% would specifically recommend 5-hour ENERGY®.

After receiving the results of the online survey and the paper survey, Living Essentials created three versions of the AYD television commercial, two 30-second spots and one 10-second version. (Exs. 649, 640, and 2098). Sperber was personally involved in the development of the script for these ads. He testified that the intent was to convey to consumers that doctors viewed 5-Hour ENERGY® as a safe and effective nutritional supplement as a way of allaying possible

[3] Living Essentials used the phrase "in-person survey" to describe the second survey. The Court does not find this to be an accurate description of how Living Essentials conducted the survey. No doctors were questioned in a face-to-face meeting.

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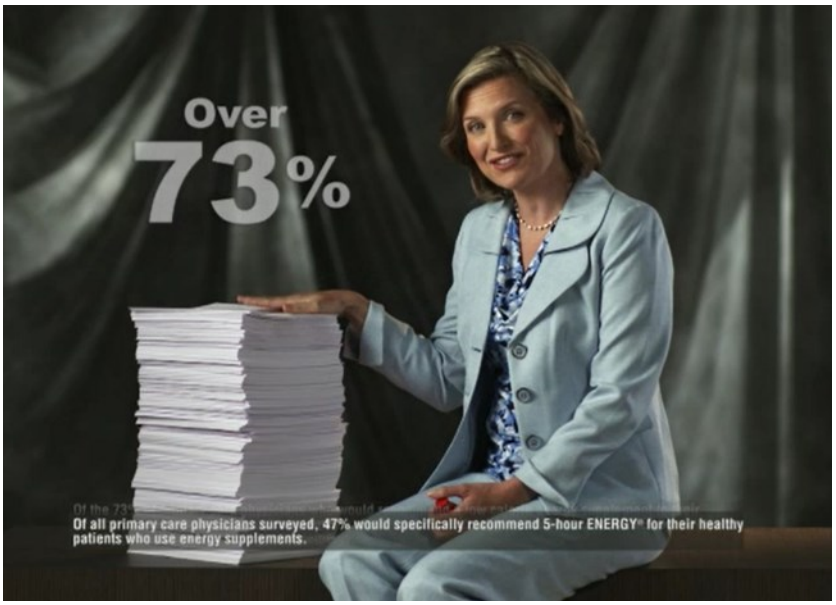
health and safety concerns. He sought to convince consumers that, by and large, doctors recommended a product like 5-Hour ENERGY®.

The script for the 30-second ad (Ex. 2122) said "We asked over 3,000 doctors to review 5-Hour ENERGY®. And what they said was amazing. Over 73 percent who reviewed 5-hour ENERGY said they would recommend a low calorie energy supplement to their healthy patients who use energy supplements. *Seventy-three percent*. 5-hour ENERGY® has four calories and it's used over nine million times a week. Is 5-hour ENERGY® right for you? Ask your doctor. We already asked 3,000." Placed next to the ad spokeswoman was a large stack of papers, which she flipped through or gestured to while speaking:



The fine print from this screen shot said "Of all primary care physicians surveyed, 47% would specifically recommend 5-Hour ENERGY® for their healthy patients who use energy supplements."

The broadcasting networks ABC and NBC refused to run the AYD ads without some changes to the script. Consumers also complained to Living Essentials about the Ask Your Doctor ads and these complaints were a contributing factor for the company pulling the ads before the end of the campaign.

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5. Living Essentials' Claim Substantiation

Before this litigation began, Living Essentials had commissioned three literature reviews and two scientific studies concerning the efficacy of 5-hour ENERGY®.

(i) Glade Reports

In 2007, Living Essentials, through Jonathan Emord, an attorney with Emord & Associates, commissioned Dr. Michael Glade, a Fellow in the American College of Nutrition, to conduct a review of the scientific literature to assess certain Living Essentials promotional claims, including "B-Vitamins for Energy," "Amino Acids for Focus and Better Mood," and "No Crash Later." (Ex. 2071). Dr. Glade testified that he found competent and reliable scientific support for these claims and prepared a written report which he provided to Emord in July 2007. Dr. Glade testified that when he reviewed the scientific literature, he examined the studies to verify that they were conducted in a scientifically sound manner before including them in his literature review.

As to the claim that 5-Hour ENERGY® provides energy that lasts for hours, he concluded that the literature supported this claim because the concurrent consumption of taurine, caffeine, and glucuronolactone increases the conversion of stored triglycerides into energy. As to the claim that B-vitamins in 5-Hour ENERGY® provide energy, he concluded that the literature supported this claim because the daily consumption of niacin, vitamin B_6, vitamin B_{12}, and folate supports the use of fatty acids for metabolic energy production. As to the claim that the amino acids in 5-Hour ENERGY® provide focus, Dr. Glade concluded that the literature supported this claim because the consumption of N-acetyl-L-tyrosine and L-phenylalanine enhances cognitive functioning. Regarding the "no crash" claim, Dr. Glade repeated his summary of the literature on the effects of caffeine but really does nothing more. . Dr. Glade's report does not discuss what is meant by "crash," or the impact of glucose or caffeine withdrawal on any sudden decrease in energy levels. It is unclear how the studies he cites relate in any way to the "no crash" claim.

At some point, Living Essentials received a copy of the 2007 report because it produced the report to the Attorney General as substantiation in this lawsuit.

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In 2010, Living Essentials commissioned Dr. Glade to conduct a similar literature review to assess whether there was competent and reliable scientific evidence to support claims that Living Essentials' Decaf 5-hour ENERGY® provides energy and alertness that lasts for hours without any crash effect. (Ex. 2079). He was also asked to substantiate the claim that the drink contained a "proven blend of B-vitamins, amino acids and essential nutrients to keep you going strong." *Id.* Dr. Glade reviewed some 217 scientific studies and concluded that there was science to back each of these claims. With regard to the contention that the energy provided by the drink would "last for hours," Dr. Glade cited studies relating to taurine, which he concluded demonstrated that daily dietary supplementation of taurine in 3000 mg or more increased metabolizable energy that could last for at least four hours (Decaf 5-Hour ENERGY® contains only 483 mg of taurine). He also cited studies for the proposition that the daily intake of certain B vitamins supported the production of energy within 2 hours of consumption and for 12 to 24 hours after consumption. As to the "no crash later" claim, Dr. Glade concluded that dietary supplements that do not contain sugar or caffeine cannot produce a "sugar crash" or caffeine withdrawal effect.

Again, there is no evidence that any employee of Living Essentials reviewed Glade's 2010 literature review, but Living Essentials provided it to the Attorney General as substantiation for its decaf claims.

The Court has serious questions about the scientific reliability of Dr. Glade's two reports. First, his analysis was based on a non-quantitative list of ingredients in 5-Hour ENERGY®. He was not given the actual formula, so Dr. Glade was unable to look at the actual amounts of vitamins and amino acids contained in the product to compare to the levels tested in the studies he reviewed. Second, Dr. Glade's 2007 literature review did not evaluate how 5-Hour ENERGY®, or any of its ingredients in the amounts found in 5-Hour ENERGY® would affect healthy, well-nourished individuals. Dr. Glade admitted in his deposition that it was possible that the caffeine, by itself in

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5-Hour ENERGY®, could be causing the energy, alertness, and focus that consumers felt after drinking the energy supplement.

Third, Dr. Glade relied on studies that evaluated the consumption of certain vitamins and nutrients in sick populations. The scientists who testified at trial disagreed as to whether these factors undercut Dr. Glade's conclusions. There was no analysis in either report as to why reliance on the studies he cited was appropriate.

Finally, Dr. Glade did not communicate his conclusions to anyone directly working for Living Essentials. Carl Sperber, the director of advertising, had never seen either of Dr. Glade's reports. Sperber testified that starting in 2007, the company began relying on the Oakland Law Group to review all of the ads he created to ensure that they were backed by adequate substantiation. No one from the Oakland Law Group testified regarding what role, if any, the 2007 Glade Report played in substantiating specific ad representations.

(ii) Blum Study

Living Essentials commissioned James Blum, Ph.D., an epidemiologist, to conduct a clinical trial to assess the effects of the 2004 formulation of 5-hour ENERGY® as compared to two other energy drinks then on the market, but not to a placebo. Dr. Blum tested subjects' peak energy, the duration of energy, and any "crash." He concluded that consumers' self-reported peak energy after drinking 5-Hour ENERGY® occurred at 4.92 hours. The peak energy duration for the two competing products occurred at 4.39 and 4.34 hours, which Dr. Blum felt were similar results. Dr. Blum also asked test subjects whether they experienced a "crash" after drinking the three energy drinks. Dr. Blum testified that he considered a "crash" to be the experience of hitting a "floor or wall" where the test subjects self-reported feeling physiologically stressed. Based on this definition of "crash," he concluded that 24 percent of the people consuming 5-Hour ENERGY® reported experiencing a "moderately severe" crash. Eighty percent of the Red Bull and 75 percent of the Monster group reported experiencing a similar crash. Dr. Blum did not test

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the non-caffeine ingredients of 5-Hour ENERGY® and reached no conclusions as to the efficacy of these ingredients in the absence of caffeine.

Dr. Blum provided his final report directly to Living Essentials in May 2007. (Ex. 2153) Living Essentials retained a copy of Dr. Blum's report in its files, and that report constituted part of Living Essentials' substantiation for its promotional claims about the 5-hour ENERGY® products.

(iii) NERAC Report

Also in 2007, Living Essentials, through Jonathan Emord of Emord & Associates, commissioned NERAC, Inc., a global research and advisory firm, to conduct a review of the scientific literature to assess certain promotional claims including "No Crash Later," "B-Vitamins for Energy," "Amino Acids for Focus and Better Mood," and "Reduction in Fatigue." (Ex. 2070) NERAC's team of biochemists, food scientists, and nutritionists sought to find at least one ingredient in 5-Hour ENERGY® that supported each of the company's claims. They looked at the research into B vitamins, the amino acids, and caffeine.

NERAC's conclusions differed from those of Dr. Glade. For example, NERAC concluded that there was no support in the literature for claiming that glucuronolactone improved memory, supplied energy, or affected fatigue. Although NERAC identified one study that indicated that a high dose of glucuronolactone delayed the onset of fatigue, the dose was 34 times the amount of glucuronolactone in 5-Hour ENERGY®. Because NERAC found no study varying the dosage level of this ingredient, it concluded that one could not say that the glucuronolactone in 5-Hour ENERGY® had a measurable effect on energy or fatigue. With regard to the "B Vitamins for Energy" claim, NERAC concluded that 5-Hour ENERGY® included B vitamins at doses high enough to "promote mental health and support good physical condition and provide energy." With regard to the "Amino Acids for Focus" claim, NERAC concluded that 5-Hour ENERGY® included certain amino acids, namely phenylalanine and tyrosine, had been shown to improve mood and attention, and thus supported the claim.

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NERAC's discussion of the "no crash later" claim was quite abbreviated. It stated that the "crash" phenomenon was related to sudden shifts in blood sugar levels and because 5-Hour ENERGY® contains no sugar, it could not contribute to a sudden change in blood sugar levels. NERAC found no published human studies showing a relationship between any of 5-Hour ENERGY®'s ingredients and a "crash" as NERAC defined it.

Living Essentials provided a copy of the NERAC report as part of its substantiation for its promotional claims about the 5-hour ENERGY® products.

(iv) Medicus Clinical Study

In early 2008, Emord & Associates contacted Dr. Jay Udani, the CEO and Medical Director of Medicus Research LLC, to conduct a clinical trial of 5-Hour ENERGY®. The purpose of the study was to establish the scientific validity of claims the company was either making at the time or intended to make about its product in the future. Medicus retained Dr. Keith Wesnes and his firm, Cognitive Drug Research ("CDR"), to assist with the study. CDR had developed a computerized cognitive assessment tool to assist researchers in evaluating the effect of certain commercial products on human test subjects. (Ex. 1452). CDR's core battery of automated tests included immediate word recall, reaction time to questions, working memory, delayed word recall, word recognition, picture recognition, and self-reported alertness, calmness, and contentment.

Ultimately, Drs. Udani and Wesnes proposed to undertake a 4-arm crossover, randomized, double-blind, placebo-controlled study to assess the efficacy of a single dose of 5-Hour ENERGY® compared to a placebo, and the efficacy of one active comparator (Monster Energy Drink) to a placebo, measured by alertness and cognitive function over a 6-hour period. (Ex. 1455, 1448). The trial involved five separate visits to the test site. The primary objective was to measure the power of attention, continuity of attention (focus), quality of short-term working memory, qualify of episodic (long-term) memory, speed of memory, and self-related alertness. The secondary objective was to assess the effects of 5-Hour ENERGY® on blood glucose levels. The tertiary objective was to assess changes in self-related contentment, calmness, mood, and fatigue.

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Ninety test subjects underwent a screening visit where they were trained on the CDR tests hourly for 4 hours. They were provided standardized frozen foods with low glycemic content to consume the day before each visit. They were instructed not to drink any alcohol or energy drinks the day before each visit and to sleep only 3 to 6 hours the night before. Participants were instructed not to consume more than 4 cups of coffee the day before each visit and not to consume any caffeine or food on the morning of each visit. The subjects were provided the same standardized meal of eggs, bacon and sausage on each study day, two hours after consuming the energy drink or placebo. They were not provided any carbohydrates.

Dr. Udani concluded that 5-Hour ENERGY® had a statistically significant effect on cognitive function and mental energy over a 6-hour test period as compared to the placebo. There was no evidence of a statistically significant drop in blood sugar compared to placebo (and thus no "crash"), and there were no statistically significant diminishment in mood, contentment, calmness, depression, or anxiety that would represent a negative effect of using the product.

The study tested the effects of the 5-Hour ENERGY® formula as a whole. It did not study or test the effects of any of the non-caffeine ingredients. Nor did Dr. Udani examine whether 5-Hour ENERGY® was "superior" to drinking the same amount of caffeine in some other form, such as in coffee. Because the clinical trial did not evaluate separate ingredients in 5-Hour ENERGY®, Dr. Udani testified it was not possible to draw any conclusions about the benefits of such individual ingredients from the Medicus Report's data.

The experts disagreed about the reliability of the study's data or the validity of any conclusions one could draw from the data, given its design. Dr. McLellan, an expert on caffeine, credibly testified that because Dr. Udano allowed test subjects arrive in a caffeine withdrawn state, and the placebo group's overall performance was so far below baseline, any statistically significance in test scores between the 5-hour ENERGY® group and placebo group was likely attributable to the former group's ingestion of caffeine.

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6. Post-Claim Scientific Evidence

Living Essentials presented additional scientific evidence, developed after its ads aired, to substantiate the claims now being challenged by the State.[4]

a. Moat Article (2003)

In 2003, Stuart Moat published an article entitled "Folate, homocysteine, endothelial function and cardiovascular disease," in the Journal of Nutritional Biochemistry. (Ex. 2002). Moat's article is a literature review on the effect of folate or folic acid deficiencies on the cardiovascular system. Moat concluded that that folate can reverse endothelial dysfunction.[5] According to Dr. Kennedy, Moat also found that the cardiovascular benefit of taking a single dose of folate can be detected physiologically within two hours of ingestion, at four hours post-ingestion, and even after six weeks.

b. Scholey & Kennedy Study (2004)

In 2004, Andrew Scholey and David Kennedy co-authored a paper entitled "Cognitive and physiological effects of an "energy drink": an evaluation of the whole drink and of glucose, caffeine and an herbal flavoring fractions." (Ex. 2068). They conducted a double-blind, placebo-controlled crossover study to evaluate the effects of a non-caloric placebo drink with (a) an energy drink containing glucose, caffeine, and guarana; (b) a drink containing only the glucose fraction of the energy drink; (c) a drink containing only the caffeine fraction of the energy drink; and (d) a drink containing only the flavoring fraction of the energy drink. Scholey and Kennedy used CDR's cognitive testing system on their test subjects.

They concluded that there were improvements to cognitive functioning after the consumption of the energy drink but that neither glucose nor caffeine in isolation provided any

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[4] The State argues that any scientific evidence developed after Living Essentials aired or published its ads is legally irrelevant because the FTC guidelines required pre-claim substantiation. While this Court acknowledges that both the FTC guidelines and federal case law indicate that pre-claim substantiation is required, the Court also concludes that subsequent scientific studies may shed light on pre-claim studies and are thus relevant and material to the Court's CPA analysis.

[5] Endothelial function is the measure of how well the body is delivering blood on demand to the periphery, including the brain.

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significant improvements in cognitive functioning. They concluded that their test results strongly suggest that the cognitive enhancing properties of energy drinks containing glucose, caffeine and guarana[6] were attributed to the combination of active ingredients, rather than solely to caffeine.

The study does not directly support the contention that 5-Hour ENERGY®'s ingredients work together to achieve results not attributable to caffeine alone because 5-Hour ENERGY® does not contain any glucose or guarana. But Living Essentials contends and Dr. Kennedy testified that the study is strongly supportive of the proposition that it is not the caffeine alone in 5-Hour ENERGY® that makes it effective.

c. Haskell & Kennedy Study (2005)

Dr. Kennedy testified that in 2005, he and a colleague, Crystal Haskell, co-authored a paper that looked at the effects of both caffeine (given in two different dose levels, 75 mg and 150 mg) in habitual users and non-users by examining cerebral blood flow. (Ex. 2004). They concluded that caffeine improved cognitive performance and mood in healthy, young adults regardless whether the adults were habitual users or non-users of caffeinated products. All of the scientific experts agreed that caffeine is well-documented to improve cognitive performance.

d. Giles Study (2012)

In 2012, Grace Giles *et al*. published an article entitled "Differential cognitive effects of energy drink ingredients: Caffeine, taurine, and glucose," in the journal Pharmacology, Biochemistry and Behavior. (Ex. 665, 2034). Giles studied the effects of caffeine, taurine, and glucose (both alone and in combination) on cognitive performance and mood in 24-hour caffeine abstaining habitual caffeine consumers. Subjects took cognitive tests 30 minutes and 60 minutes post-ingestion. Giles found that caffeine enhanced executive control and working memory, and reduced simple and choice reaction time, that taurine increased choice reaction times but reduced reaction time in working memory tasks, and that glucose slowed choice reaction time. Glucose, combined with caffeine, enhanced working memory. Taurine, combined with glucose and

[6] Guarana is a plant containing caffeine.

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caffeine, enhanced orienting attention. Caffeine reduced feelings of fatigue and increased tension and vigor. Taurine reversed the effects of caffeine on vigor and caffeine-withdrawal symptoms. Giles' final conclusion, however, was that caffeine, not taurine or glucose, is likely responsible for reported changes in cognitive performance following the consumption of energy drinks, particularly in caffeine-withdrawn habitual caffeine consumers.

e. Wesnes's *Appetite* Article (2013)

In 2013, Dr. Wesnes, along with Dr. Udani and Dr. Barrett, published an article outlining the results of the Medicus Study in the journal, *Appetite*. (Ex. 664, 2107). In the article entitled "An evaluation of the cognitive and mood effects of an energy shot over a 6 h period in volunteers. A randomized, double-blind, placebo controlled, cross-over study," Dr. Wesnes described the Medicus clinical trial and the results from that trial. The article described the study's results this way: "an energy shot can significantly improve important aspects of cognitive function for up to 6 h[ours] compared to placebo in partially sleep-deprived healthy volunteers." Dr. Wesnes testified that he thought the results of the tests in the Medicus study were "most uncaffeine-like" because the differences in the cognitive performance of the 5-Hour ENERGY® group and the placebo group were significant over the entire 6-hour period.

Dr. Kennedy testified that the results of the Medicus clinical trial demonstrated that 5-Hour ENERGY® provided improvements in attention, working memory, long-term memory, alertness, depression, and anxiety and that these improvements endured for six hours. He also opined that, based on other studies relating to the benefits of caffeine, these effects could not be attributable to caffeine alone. Dr. McLellan disagreed with this interpretation of the data when he testified that 5-Hour ENERGY® did not improve any test scores; it simply showed less of a diminishment of cognitive functioning in sleep-deprived and potentially caffeine withdrawn test subjects, than placebo. He found the test results consistent with prior studies showing the impacts on caffeine over time.

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f. Kurtz Article (2013)

In 2013, Abigail Kurtz *et al.* published an article entitled "Effects of Caffeinated Versus Decaffeinated Energy Shots on Blood Pressure and Heart Rate in Healthy Young Volunteers," in the journal Pharmocotherapy. (Ex. 2044). Kurtz's article described a study evaluating the effects of a single dose of caffeinated 5-Hour ENERGY® shot compared with a decaffeinated 5-Hour ENERGY® shot, assessed by changes in blood pressure and heart rates in healthy volunteers. Kurtz sought to determine if the non-caffeine ingredients in 5-Hour ENERGY® were affecting blood pressure. Kurtz found that the caffeinated shot significantly increased systolic and diastolic blood pressure over a three-hour period compared with the decaf version of the drink. She concluded that it was unlikely that the non-caffeine ingredients were contributing to blood pressure increases. Kurtz also reported that self-reported energy levels did not vary significantly between the caffeinated and decaffeinated versions of 5-Hour ENERGY® over time. She concluded that "[i]t appears that the decaffeinated shot provides the same amount of increase in perceived energy without the rise in peripheral blood pressure noted with the caffeinated shot."

g. Nagrecha Study (2013)

Natasha Nagrecha et al. published an article entitled, "The Effect of Caffeine and Choline Combinations on Short-term and Auditory Memory," in 2013 in the journal, *Clinical Pharmacol Biopharmaceutical* (Ex. 2238), in which she reported on a study to determine whether choline in combination with several doses of caffeine could facilitate short-term visual and verbal memory and attention in adult and middle aged human subjects with normal cognitive function. Subjects underwent computerized testing once 40 minutes after ingestion. The test results showed that subjects ingesting 100 mg caffeine and 2 grams of choline bitartrate and those ingesting choline alone showed no change in performance on short-term memory or attention tests compared to placebo. The group ingesting 50 mg of caffeine and 2 grams of choline bitartrate scored significantly lower on tests for short-term verbal memory and attention than a placebo group. The

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subjects ingesting 25 mg of caffeine and 2 grams of choline bitartrate scored significantly higher on tests for short-term visual memory than a placebo group.

h. Marczinski Study (2014)

Cecile Marczinski authored an article entitled "Subjective State, Blood Pressure, and Behavioral Control Changes Produced by an 'Energy Shot'" in the Journal of Caffeine Research in 2014. (Ex. 2056) The purpose of the Marczinski Study was to investigate the acute effects of 5-Hour ENERGY® on subjective and objective measures assessed hourly for 6 hours following consumption. Marczinski concluded that while 5-Hour ENERGY® improved subjective feelings of vigor and reduced fatigue, the subjects' objective performance on a computerized cognitive test did not improve, and in fact worsened over time.

i. Shah Study (2015)

Dr. Blonz and Dr. Kennedy both referenced a study published by Sachin Shah entitled "Energy Implications of Consuming Caffeinated Versus Decaffeinated Energy Drinks." According to Dr. Kennedy, Shah's article was published in the Journal of Pharmacy Practice, although the article itself is not in evidence (Ex. 2254, p. 65). Dr. Kennedy summarized Shah's study: Shah conducted two studies to measure subjective energy levels in participants who consumed a caffeinated version of 5–Hour ENERGY® and a decaffeinated version of 5-Hour ENERGY®. Dr. Kennedy testified that Shah's test results indicated that both caffeinated and decaffeinated 5-Hour ENERGY® "significantly boosted energy levels 1 hour after consumption, but caffeinated EDs have a significantly greater boost and it is sustained at least 3 hours after consumption."

j. Buckenmeyer Study (2015)

In 2015, Phillip Buckenmeyer published an article entitled "Cognitive Influence of a 5-h ENERGY® shot: Are effects perceived or real?" (Ex. 1398). Buckenmeyer studied the effects of consumption of a 5-Hour ENERGY® shot on various cognitive functions across five hours on 24 college-aged students using a double-blind, cross-over, placebo-based design. Buckenmeyer

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concluded that while 90% of the participants subjectively thought that 5-Hour ENERGY® effective one-hour post-ingestion, he found no evidence that it enhanced recognition, reaction time, short-term and working memory, or attention capacity. Buckenmeyer did not use CDR's test battery but instead used a web-delivered cognitive assessment from Lumosity.com.

k. Molnar Study (2015)

Janos Molnar authored an article entitled "Evaluation of the Effects of Different Energy Drinks and Coffee on Endothelial Function." Molnar looked at four different treatments: 5-Hour ENERGY® (230 mg of caffeine), Red Bull (80 mg caffeine), a drink called NOS (120 mg caffeine), and coffee (240 mg caffeine), and compared test subjects' endothelial function over a 4 hour period. (Ex. 2137). The endothelium is the lining of the blood vessels. The endothelium responds to signals from the brain to dilate or contract blood vessels. The body needs to ensure that blood is delivered to working muscles. A properly functioning vasculature, reflected in endothelial function, provides this service to the body. Molnar found a significant improvement in endothelial function (or blood flow) 1 ½ and 4 hours after the subjects consumed 5-Hour ENERGY® and Red Bull. Neither NOS nor the coffee, containing the same amount of caffeine as 5-Hour ENERGY®, changed endothelial function significantly.

The Molnar Study did not test energy, alertness or focus. It looked at endothelial function as a proxy for coronary function, or how the heart works. Dr. Blonz did not find the Molnar Study to be relevant for this reason. Dr. Kennedy opined that the Molnar Study supported the proposition that the physiological effects of 5-Hour ENERGY® cannot be attributed to caffeine alone. Because endothelial functioning relates to how well the body delivers blood on demand to the brain, Dr. Kennedy testified that it is reasonable to conclude from Molnar's results that 5-Hour ENERGY® would have a greater impact on cognitive functioning than would caffeine alone.

l. Jacobson Study (2015)

In 2015, B.H. Jacobson published a study in the journal *Perceptual & Motor Skills*, entitled "Effect of Energy Drinks on Selected Fine Motor Tasks." (Ex. 2060). Jacobson assessed the effect

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of energy shots on certain fine motor skills of college-aged males. Jacobson noted that the stimulant energy blends present in most of the commercially available energy shots and energy drinks include caffeine, taurine, guarana, ginseng, glucose, and B vitamins. He notes that "very little research on the combined or synergistic effects of these ingredients" has been done. After summarizing the conflicting results of studies examining the effect of caffeine combined with taurine or glucose, he stated that the purpose of his study was to "compare hand steadiness, choice reaction time, pursuit rotor tracing, and simple reaction time following ingestion of a commercially available energy shot or a placebo." The energy shot involved in the test was 5-Hour ENERGY® Extra Strength.

Jacobson's study showed that the ingredients in 5-Hour ENERGY® did affect the subjects' physical performance. The energy shot did not improve hand steadiness over the placebo but did improve reaction times, which the author surmised may be the result of the caffeine in 5-Hour ENERGY®.

m. Bloomer Study (2015)

Richard Bloomer published the article, "Comparison of 5-Hour ENERGY and Caffeine on Cognitive Performance and Subjective Feelings in Young Men and Women," in the Journal of Caffeine Research in 2015. (Ex. 1397). Bloomer sought to compare the effects of 5-Hour ENERGY® to caffeine only and to a placebo on subjective feelings of energy and mood, objective measures of cognitive performance, heart rate, and blood pressure in men and women. Bloomer's study concluded that neither caffeine nor 5-Hour ENERGY® resulted in an improvement in subjective feelings of energy or mood or in objective cognitive performance. The results clearly diverge from those of the Medicus Study. Dr. Blonz attributed the difference to the design of the study: the Bloomer participants were allowed to eat breakfast on the day of testing, suggesting that the lack of food impacted the Medicus test results. Dr. Kennedy felt that the Bloomer study must have been flawed because the lack of improved functioning after ingesting the caffeine-only drink

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was inconsistent with most of the recognized science relating to caffeine but he was unable to identify what any such flaws were.

n. Pomportes Study (2015)

Laura Pomportes et al. wrote the article, "Heart Rate Variability and Cognitive Function Following a Multi-Vitamin and Mineral Supplementation with Added Guarana (*Paullinia cupana*), in the journal, Nutrients (Ex. 2062). The Pomportes Study assessed cognitive performance and heart rate variability following the ingestion of either a multivitamin and mineral combination supplemented with 300 mg of guarana, compared to a caffeine supplement or a placebo. Test participants were asked to perform cognitive tasks 15 minutes after ingestion and then every 15 minutes over a 3-hour period. The results indicated that those ingesting the multivitamin/mineral/guarana product performed better on cognitive tests than the caffeine only or placebo. Dr. Kennedy testified that the study is significant in that it demonstrated that a mixture of multivitamins, minerals and guarana worked better in improving cognitive functioning than caffeine.

o. Paulus Study (2015)

In May 2015, an undergraduate student in Ohio named Ryan Paulus published an article documenting a study he and colleagues performed to test cognitive functioning and self-related mood of college students after consuming 5-Hour ENERGY®, or a Starbucks DoubleShot®, or a drink containing caffeine powder. Paulus concluded that the 5-Hour ENERGY® appeared to perform better than the other two products. Experts for both parties agree that this study has some fairly basic methodological problems. The study was not blind, for example, and there were limited controls on the test subjects' food consumption and activities during the tested time periods.

p. Cheskin Study (2016)

In July 2016, Lawrence J. Cheskin, a researcher at Johns Hopkins Bloomberg School of Public Health, issued a report to the Oregon Department of Justice entitled "Randomized, Placebo-

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Controlled Crossover Trial of an Energy Drink." (Ex. 2247). Cheskin stated that the most common active ingredient in energy drinks is caffeine "but whether energy drinks boost energy due to caffeine, other non-herbal (vitamins, minerals, amino-acids) and herbal ingredients that may be present, or a combination remains unclear." He stated that all previous studies of the efficacy of energy drinks "lacked sufficient power and were generally not placebo-controlled." Because he did not find sufficient evidence to determine the effect of any ingredients other than caffeine, in boosting energy, Cheskin sought to test the efficacy of 5-Hour ENERGY® Decaf, compared to a placebo drink.

Cheskin's study involved 147 participants who were given Decaf 5-Hour ENERGY® or a placebo drink and then underwent computerized cognitive tests at 30 minutes, 1 ½ hours and 5 hours post-ingestion. The Cheskin data indicate that there was no significant improvement in cognitive, behavioral, or energy-level performance after consuming 5-Hour ENERGY® Decaf compared to the placebo drink. After comparing the relative reliability of his study results as compared to those of Paulus, Kurtz and Giles, he concluded "We found strong evidence that 5-Hour ENERGY Decaf is not efficacious in enhancing energy levels or any related cognitive behavioral parameters measured."

Dr. Blonz believed that the Cheskin Study was competent and reliable; Dr. Kennedy did not. Dr. Kennedy criticized the design of Cheskin's study because 38 percent of the participants were morbidly obese, and thus might suffer from obesity-related illness; the age range of the participants was overly large, from age 18 to 70, which could confound the cognitive test results; and the cognitive tests were run over the weekend when it would have been difficult to control for sleep, food intake, caffeine intake, or alcohol use.

7. The Blonz/McLellan/Kennedy Scientific Disputes

The scientists presented by the State and Living Essentials disagreed on several key issues. The Court summarizes its understanding of these disputes below.

a. Whether caffeine is the sole active ingredient in 5-Hour ENERGY®.

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The complaint alleges that caffeine is the sole active ingredient in 5-Hour ENERGY®. By "active ingredient," the Court adopts Dr. Blonz's definition: an ingredient that has a physiological effect on the human body. Dr. Kennedy presented convincing testimony, and the studies each side cited also support the conclusion, that the B-vitamins, and the amino acids can have a physiological effect on the body. The Court finds from this evidence that caffeine is not the sole active ingredient in 5-Hour ENERGY®. As previously described above, B vitamins, taurine, tyrosine and choline are bioactive. B vitamins, in general, promote metabolism which plays a role in the generation of physiological energy and can affect cognitive function and mood. Taurine can improve endothelial function and reduce subjective feelings of fatigue. Tyrosine can promote the formation of neurotransmitters.

It does not necessarily follow, however, that these bioactive ingredients in 5-Hour ENERGY®, in the amounts found in that product, are efficacious in providing consumers with the advertised benefits of "energy, alertness, and focus." Dr. Kennedy agreed with Dr. McLellan that there is no experimental evidence showing that the addition of multivitamins to a caffeinated energy drink will cause greater improvement in physical and cognitive performance than can be attributed to the effects of caffeine alone.

b. Whether healthy, well-nourished adults can benefit physiologically from vitamins and amino acids in 5-Hour ENERGY®.

Dr. Blonz testified that healthy, well-nourished adults will receive no benefit from the B-vitamins and amino acids found in 5-Hour ENERGY® and that these ingredients provide no physiological benefit and would simply be excreted. Dr. Kennedy strongly disagrees with this opinion and testified that the recommended daily allowance of a particular vitamin is a minimum that humans should receive each day to prevent disease. He provided the results of a study he conducted and published in the article "Multivitamins and minerals modulate whole-body energy metabolism and cerebral blood-flow during cognitive task performance: a double-blind, randomized, placebo-controlled trial," in the journal *Nutrition & Metabolism* in 2016. This study

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investigated whether supplementing the diet of healthy females with a multivitamin could affect metabolic and cerebral blood flow consequences, assessed through cognitive tasks. He found that just a single dose of Vitamins C and B led to an increase in fat oxidation and total energy expended. The Court finds this evidence to be compelling proof that healthy, well-nourished adults can benefit from some of the vitamins in 5-Hour ENERGY®. The State has not shown that the vitamins and nutrients in 5-Hour ENERGY® provide no benefit whatsoever.

c. Whether the Medicus Study supports Living Essentials' claims that non-caffeine ingredients contribute to the overall effectiveness of 5-Hour ENERGY®.

The Medicus Study concluded that subjects who drank 5-Hour ENERGY® performed better on tests of power of attention, continuity of attention, quality of working memory, and quality of episodic memory at several measurement points throughout the 6 hours. Dr. McLellan, an expert on caffeine, testified that there is no basis for concluding that these results were attributable to any ingredient other than caffeine. Dr. Kennedy disagrees. He testified that because caffeine has not been demonstrated to improve episodic memory and the 5-Hour ENERGY® improved episodic memory, there must be some interaction between the caffeine and the other bioactive ingredients causing this result.

After reviewing the scientific evidence and the testimony of Drs. McLellan and Kennedy, the Court finds Dr. McLellan's opinion to be the more credible. First, Medicus did not design its study to determine whether the **non-caffeine** ingredients in 5-Hour ENERGY® led to improved performance on these cognitive tests. One of the study's co-authors, Marilyn Barrett, testified on that "the study was not designed to show what kind of effect there was with caffeine and the other ingredients. It could have been additive. It could have been synergistic. It could be no effect. The study was not designed to show that." (Barrett Dep. 70:19-23).

Second, the Court agrees with Dr. McLellan that the test results from the Medicus clinical trial do not show that consuming 5-Hour ENERGY® **improved** any of the test subjects' cognitive functioning, including episodic memory, above baseline. The results merely indicate that the

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cognitive performance of the 5-Hour ENERGY® group did not diminish as much as that of the placebo group.

Third, the Court also finds compelling Dr. McLellan's testimony that the Medicus study had design flaws that, whether intentional or not, inflated the positive results of the study in favor of 5-Hour ENERGY®. Test subjects were asked to perform the computerized tests in a state of sleep deprivation, which Dr. Udani acknowledged would have a negative impact on cognition and affective processing. (Ex. 1458). Limiting test subjects' sleep ensured a greater impact from the caffeine in 5-Hour ENERGY®, resulting in higher test scores by participants who received 5-Hour ENERGY® as opposed to those receiving the placebo. The test subjects were additionally not permitted to consume caffeine on the day of testing, which meant that for those who regularly drink caffeine, they were arriving in a caffeine withdrawn state. Because scientific literature demonstrates that caffeine withdrawal has a negative effect on performance, those test subjects who were habituated to caffeine and received the placebo would have inevitably performed more poorly than the test subjects who received the caffeinated 5-Hour ENERGY®.

Finally, episodic memory has little to do with the claimed benefit of "energy, alertness and focus." The evidence presented at trial makes it clear that caffeine provides these benefits. While it is certainly plausible that the non-caffeine ingredients have a synergistic effect with the caffeine to enhance or extend the effect of the caffeine, that question has not been studied. The Court finds that the Medicus Study does not support a claim that the non-caffeine ingredients in 5-Hour ENERGY® contribute to the effectiveness of 5-Hour ENERGY®.

d. Whether the Monster Arm data undermines Living Essentials' contention that the cognitive benefits from 5-Hour ENERGY® seen in the Medicus Study are attributable to its non-caffeine ingredients.

The *Appetite* article made two controversial statements about the Medicus Study results. First, Drs. Wesnes, Udani, and Barrett wrote that the caffeine in 5-Hour ENERGY® was unlikely to account for the effects seen in study participants because caffeine's effects dissipate after 90 minutes. Second, they wrote that "no other study with an energy shot has yet demonstrated such

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a widespread improvement to various aspects of cognitive function which have sustained to 6 h." (Ex. 2107).

On the eve of trial, the Court ordered Living Essentials to produce documents relating to data Medicus collected from a part of its study known as the "Monster Arm." These documents revealed that in addition to testing subjects after consuming 5-Hour ENERGY®, the Medicus team had also tested the same subjects after they consumed a competitor energy drink, Monster, and a placebo. Thus, there were in fact four "arms" to the Medicus Study: 5-Hour ENERGY®, a comparison placebo, Monster, and a comparison placebo. The Court rejects Living Essentials' argument that the Monster Arm was a "completely different study." The IRB protocol and IRB approval was the same; the test subjects were the same. Test participants took the same battery of computerized tests and answered the same questionnaire about calmness, alertness, and contentment after consuming all four drinks.

The Court also rejects Living Essentials' contention that the Monster Arm data was never analyzed. In fact, the Medicus Study team prepared a fairly extensive analysis of the two arms of the study. The team labeled the 5-Hour ENERGY® drink as "Drink A," and its comparison placebo as "Drink B." The Monster drink was labeled as "Drink E," and its comparison placebo labeled "Drink D." In a summary of the data comparing Drinks A and B and Drinks D and E, the Medicus team reported that the all of the composite scores between 5-Hour ENERGY® and the placebo were different, with the 5-Hour ENERGY® group outperforming the placebo group on all performance measures except self-rated calmness. With regard to the Monster group, the team concluded that four of the five major composite scores and self-ratings were significantly different between the Monster and placebo. Monster outperformed the placebo on four performance measures (power of attention, continuity of attention, quality of working memory, and quality of episodic memory), as well as on self-rated alertness and contentment.

While the Medicus team concluded that the cognitive benefits of 5-Hour ENERGY® over the placebo were generally greater and "more statistically reliable" than those of Monster over the

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placebo, the data nevertheless showed statistically significant cognitive benefits from Monster lasting the entire 6 hours. According to Ex. 666, Dr. McLellan's article relating to energy drinks, Monster contains 80 mg of caffeine (compared to 5-Hour ENERGY®'s 200 mg), 1,000 mg of taurine (compared to 5-Hour ENERGY®'s 467 mg), 5 mg of glucuronolactone (compared to 411 mg in 5-Hour ENERGY®), 27 grams of sugar, an unknown amount of vitamins B_2, B_3, B_5, and B_{12}, 5 mg of guarana and 200 mg of ginseng. Guarana is a plant that contains caffeine. Monster appears to contain no Vitamin B_6 or B_9, no choline or citicoline, no malic acid, no N-Acetyl-L-tyrosine, and no L-Phenylalanine.

The Court agrees with Dr. McLellan's opinion that the Monster Arm data directly contradict statements made in *Appetite*. The data demonstrates that subjects consuming 5-Hour ENERGY® **or** Monster performed better on the cognitive tests than did the subjects consuming the comparable placebo drink. Some of the early cognitive performance results from Monster could be attributable to the glucose. But, according to Dr. McLellan, the glucose would have raised the blood glucose levels over the first 30 minutes but those levels would have returned to baseline within 60 minutes. This conclusion appears credible given Dr. McLellan's analysis in Ex. 666 of the limited scientific evidence suggesting that the addition of glucose to a caffeinated energy drink will cause greater improvements in cognitive performance than can be attributed to the effects of caffeine alone. The Medicus Study showed differences in cognitive performance from Monster over placebo over the entire 6-hour period—long after the blood glucose levels would have returned to baseline. The Court agrees with Dr. McLellan that the cognitive benefits Medicus found from Monster are unlikely to be attributable to glucose alone.

According to Dr. McLellan, the caffeine in both energy drinks, however, would have remained elevated throughout the duration of the 6 hours. Any contention by Drs. Wesnes, Udani and Barrett that the effects of the caffeine would have disappeared after 90 minutes is also not supported by the science on caffeine. The Court agrees with Dr. McLellan that the Monster Arm data makes it impossible to conclude that the cognitive benefits achieved from 5-Hour ENERGY®

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are attributable to its non-caffeine ingredients. The Court also finds that Living Essentials' failure to disclose, discuss, and account for the Monster arm data undercuts the credibility of Living Essentials' claim that the non-caffeine ingredients of 5-Hour ENERGY® are working synergistically with caffeine to enhance or extend the duration of any energy, alertness, and focus than the caffeine would otherwise provide.

e. Whether the Cheskin Study undermines Living Essentials' claims about the Decaf 5-Hour ENERGY® product.

Dr. Cheskin's study concluded that 5-Hour ENERGY Decaf does not enhance energy levels or cognitive functioning. The experts who testified at trial disagree on the reliability of Dr. Cheskin's study results. Dr. Blonz testified that the Cheskin study was competent and reliable scientific evidence. Dr. Kennedy, on the other hand, deemed the study "an appalling piece of work." Dr. Kennedy criticized the methodology: (1) the principal investigator was an obesity doctor with inadequate experience in the area of brain science; (2) he believed the study was designed to reach the results the Oregon Department of Justice wanted; (3) Dr. Cheskin included participants between 18 and 70 years of age, which undercuts the reliability of the test results because cognitive function varies with age; (4) Dr. Cheskin included a significant number of morbidly obese individuals which would confound the test results; (5) the tests were done over the weekend when participants probably had been out "clubbing" and came in with either too little or too much sleep; (6) Dr. Cheskin did not train the participants on the computerized tasks to make sure they could do the tasks in the first place; (7) there were no usable baseline results because of the lack of this training; (8) Dr. Cheskin did not use one of the valid tests (POMS scale) more than once after 30 minutes which would pick up any effect from the small amount of caffeine in the product but would not pick up any effect of the other bioactive ingredients.

The Court did not hear from Dr. Cheskin himself and Dr. Blonz did not or could not rebut these criticisms. Based on Dr. Kennedy's credible review, the Court finds that the Cheskin Study

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is not sufficiently reliable to consider when assessing Living Essentials' claims regarding its decaffeinated product.

8. Living Essentials' expert testimony on substantiation standard of care and advertising subjectivity analysis.

Living Essentials presented evidence through Dr. Sanford Bigelow that it complied with industry standards in substantiating its ad claims, first, by having Carl Sperber conduct internet research on the formula's ingredients, then by instituting a process for legal and regulatory review by an outside law firm, followed by retaining Dr. Glade and NERAC to perform literature reviews, and finally, by asking Dr. Blum and then Medicus to undertake clinical studies. Dr. Bigelow concluded that Living Essentials "exceeded industry standards" in substantiating its product claims.

The Court finds some of Dr. Bigelow's opinions credible and some not. First, the Court cannot find that asking an advertising director who lacks any scientific or medical training to conduct Internet research is adequate substantiation. Mr. Sperber had no ability or training to assess the scientific reliability of anything he read online.

Second, the Court also cannot find that Living Essentials' regulatory or legal review was reasonable to substantiate the ad claims. There was no testimony from anyone who performed this review as to what they looked at or how they analyzed its accuracy and reliability. Dr. Bigelow had no idea how this regulatory review was conducted, or what criteria were applied when evaluating substantiation. There is simply no evidence in the record that anyone with any science training ever assessed the ad claims and the science backing up those claims against the FTC substantiation guidelines, as Dr. Bigelow testified he performed for his various employers and clients.

Third, there is no evidence that anyone within the company ever saw Dr. Glade's reports or the NERAC report. Although Living Essentials produced them to the Attorney General in this litigation as claim substantiation, the Court cannot find that Living Essentials knew about the

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reports when they were prepared. Mr. Sperber did not know about them and no one else from the company testified. Dr. Bigelow admitted that he has no idea whether Living Essentials even knew of or relied on the FTC substantiation guidelines when it took action to substantiate its ad claims. Thus, Dr. Bigelow's opinion that Living Essentials met the standard of care in substantiating its ad claims by procuring these reports is not supported by evidence in the record.

The Court does find that some of Dr. Bigelow's opinions are credible. For example, as set out below, the Court finds credible his testimony that the European Food Safety Authority ("EFSA") reports substantiate the general contention that certain B vitamins can help reduce fatigue and contribute to energy metabolism. The Court also agrees with Dr. Bigelow that Living Essentials acted reasonably in undertaking clinical studies. The question, however, is not whether choosing to pay for clinical studies was reasonable or met the standard of care. The question is whether the studies are adequate to support the ads' claims.

Living Essentials also presented the expert testimony of J. Howard Beales, III, a professor of strategic management and public policy at George Washington University. Dr. Beales, the former Director of the Consumer Protection Division of the Federal Trade Commission, testified that none of the claims in Living Essentials' ads are all subjective, rather than objective, and thus are not deceptive. He opined that subjective claims cannot be supported by scientific evidence.

The Court finds that Living Essentials' claims are not subjective. The company intentionally promoted the product's ingredients as changing the way the body functioned. It promoted the product as a healthy way to achieve these physiological results. The company spent a significant amount of money on clinical studies to establish that 5-Hour ENERGY® was having a biochemical or physiological effect on the bodies of its consumers. As Dr. Beale admitted, if an advertiser claims that a product will change or affect the physiological functioning of the body, that is an objective claim for which scientific substantiation exist. This Court so finds.

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E. APPLICABLE PRINCIPLES OF LAW

The Consumer Protection act prohibits companies like Living Essentials from engaging in "unfair or deceptive acts or practices in the conduct of any trade or commerce." RCW 19.86.020. The purpose of this act is to protect the public and foster fair and honest competition. RCW 19.86.920. The act is meant to be liberally construed to serve this purpose. *Short v. Demopolis*, 103 Wn.2d 52, 60-1, 691 P.2d 163 (1984); *Michael v. Mosquera-Lacy*, 165 Wn.2d 595, 602, 200 P.3d 695, 699 (2009).

The Washington Attorney General may bring an enforcement action under the CPA. RCW 19.86.080. In this CPA enforcement action, the State must prove three elements: (1) an unfair or deceptive act or practice (2) committed by Living Essentials in trade or commerce (3) that has a public interest impact. *State v. Kaiser*, 161 Wn. App. 705, 719, 254 P.3d 850 (2011). The State is not required to prove that Living Essentials' unfair or deceptive advertisements injured consumers or that consumers relied on particular 5-Hour ENERGY® ads when deciding whether to purchase or consume the dietary supplement. *Id.* A CPA claim also "does not require a finding of an intent to deceive or defraud. Good faith on the part of the seller is immaterial to liability. *Wine v. Theodoratus*, 19 Wn. App. 700, 706, 577 P.2d 612 (1978).

1. Unfair or Deceptive Act or Practice

Whether a party committed a particular act is an issue of fact. *See Leingang v. Pierce County Med. Bur., Inc.* 131 Wn.2d 133, 150, 930 P.2d 288 (1997). Whether a particular act is unfair or deceptive for purposes of the CPA – in other words, the determination of whether the CPA applies to a factual situation – is a question of law for the Court. *See Panag v. Farmers Ins. Co. of Wash.*, 166 Wn.2d 27, 47, 204 P.3d 885 (2009) (citing *Leingang*, 131 Wn.2d at 150). The CPA does not define "unfair or deceptive act or practice." The Court has allowed the definition of unfair or deceptive to evolve through the "gradual process of judicial inclusion and exclusion." *Klem v. Washington Mut. Bank*, 176 Wn.2d 771, 785, 295 P.3d 1179 (2013) (citing *Saunders v. Lloyd's of London*, 113 Wn.2d 330, 344, 779 P.2d 249, 256 (1989)). There is no limit to human

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inventiveness, so the courts and the legislature are left to define an unfair or deceptive act in order to fulfill the protective purposes of the CPA. *Id.* at 786.

Washington state courts have concluded that there are several routes a court can take when determining if a company's conduct is unfair or deceptive. *See Klem*, 176 Wn.2d at 787. Blatant, false misrepresentations that result in actual deception are obviously deceptive, although actual deception is not required, only the capacity to deceive. *Hangman Ridge Training Stables, Inc. v. Safeco Title Ins. Co.*, 105 Wn.2d 778, 785, 719 P.2d 531 (1986). In addition, a truthful statement "may be deceptive by virtue of the 'net impression' it conveys[.]" *Panag*, 166 Wn.2d at 50 (citing FTC cases).

2. FTC Advertising Substantiation Requirement

The CPA also provides that courts can be guided in their determination of whether conduct is unfair or deceptive by federal court decisions and "final orders of the federal trade commission interpreting the various federal statutes dealing with the same or similar matters" as the CPA. RCW 19.86.920; *CertainTeed Corp. v. Seattle Roof Brokers*, C 09-563 RAJ, 2010 WL 2640083, at *6 (W.D. Wash. June 28, 2010); *State v. Black*, 100 Wn.2d 793, 799, 676 P.2d 963, 967 (1984) ("When the Legislature enacted the Consumer Protection Act, it anticipated that our courts would be guided by the interpretation given by federal courts to their corresponding federal statutes"). The CPA was modeled after Section 5 of the FTC Act, 15 U.S.C. § 45(a)(1), which, like the CPA, includes a broad prohibition on "unfair or deceptive acts or practices." *Hangman Ridge*, 105 Wn.2d at 783. Washington courts have relied on cases interpreting Section 5 of the FTC Act when determining if certain conduct is unfair or deceptive. *See, e.g., Panag*, 166 Wn.2d at 49-50.

Under Section 5 of the FTC Act, to prove that an ad is deceptive, the FTC must establish (1) that an advertisement conveys a representation through either express or implied claims; (2) that the representation is likely to mislead consumers; and (3) that the misleading representation is material. *F.T.C. v. Direct Mktg Concepts, Inc.*, 569 F.Supp.2d 285, 297 (D. Mass. 2008), *aff'd*, 624 F.3d 1 (1st Cir. 2010). Neither proof of consumer reliance nor consumer injury is necessary

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to establish a Section 5 violations. *F.T.C. v. Freecom Commc'ns, Inc.,* 401 F.3d 1192, 1203 (10th Cir.2005); *F.T.C. v. Direct Mktg.*, 569 F. Supp.2d at 297-98. The Court will apply this test to the Living Essential ads in this case.

An advertisement's meaning is a question of fact. *FTC v. Nat'l Urological Grp., Inc.*, 645 F.Supp.2d 1167, 1189 (N.D. Ga. 2008), *aff'd*, 356 Fed. Appx. 358 (11th Cir. 2009). The Court must look at the advertisement's overall, net impression, rather than the literal truth or falsity of the words of the ad. *Id.* Where implied claims are conspicuous and reasonably clear from the face of the advertisement, extrinsic evidence is not required to prove the existence of implied claims. *U.S. v. Bayer Corp.*, 2015 WL 5822595, at *11 (D. N.J. Sept. 24, 2015). The Court can ascertain an advertisement's meaning by examining the ad itself. *F.T.C. v. U.S. Sales Corp.*, 785 F. Supp. 737, 745 (N.D. Ill. 1992). Even an accurate communication can be deceptive if the "net impression" it conveys is deceptive. *Panag*, 166 Wn.2d at 50. Courts "will often be able to determine meaning through an examination of the representation itself, including an evaluation of such factors as the entire document, the juxtaposition of various phrases in the document, the nature of the claim, and the nature of the transaction." FEDERAL TRADE COMMISSION, *Policy Statement on Deception* (*1*983), *at* http://www.ftc.gov/bcp/policystmt/ad-decept.htm (last accessed October 7, 2016). With respect to extrinsic evidence of the "takeaway" from an ad, consumer survey evidence or consumer testimony is not required. *F.T.C. v. Medlab, Inc.*, 615 F. Supp. 2d 1068, 1077-78 (N.D. Cal. 2009) (citing cases and rejecting defendant's argument that consumer survey evidence or consumer testimony must be presented to support a finding as to the meaning of an ad). Extrinsic evidence can include expert testimony. *FTC Policy Statement on Deception*, n.8.

In analyzing a representation, the FTC can prove that a representation is likely to mislead consumers by establishing either (1) actual falsity of express or implied claims ("falsity" theory); or (2) that the advertiser lacked a reasonable basis for asserting that the message was true ("reasonable basis" theory). *F.T.C. v. Pantron I Corp.*, 33 F.3d 1088, 1096 (9th Cir.1994) (citing

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In the Matter of Thompson Med. Co., Inc., 104 F.T.C. 648 (1984)); *F.T.C. v. John Beck Amazing Profits*, *LLC*, 865 F.Supp.2d 1052, 1067 (C.D.Cal.2012). The FTC may prove the claims are literally false if all reasonable scientists would agree that the claims do not provide the benefits as asserted. *Mullins v. Premier Nutrition Corp.*, 2016 WL 1534784, at *16 (N.D. Cal. Apr. 15, 2016) (citing *In re GNC Corp.*, 789 F.3d 505, 515 (4th Cir.2015)). The FTC may do this by showing the advertiser's expert opinions are unreasonable or that no expert believes in the assertion. *Id*. at *17. The State has indicated that it is not proceeding on the actual falsity theory but is instead proceeding solely on the reasonable basis theory. Thus, the Court will not apply the "all reasonable scientists" standard to Living Essentials' substantiation evidence in this case.

If an ad expressly states or impliedly suggests that a product successfully performs an advertised function or yields an advertised benefit, the advertiser must have a "reasonable basis" for the claim. *F.T.C. v. COORGA Nutraceuticals Corp.*, 2016 WL 4472994, at *4 (D. Wyo. 2016) (*citing In re Pfizer*, *Inc.*, 81 F.T.C. 23 (1972)). Under the reasonable basis theory, the advertiser must have had some recognizable substantiation for the representation prior to making it an advertisement. *John Beck Amazing Profits, LLC*, 865 F.Supp.2d at 1067. The advertiser has the burden of establishing what substantiation it relied on for a claim, and the State has burden of establishing that that substantiation is inadequate. *F.T.C. v. Johnson*, 96 F. Supp. 3d 1110, 1120 (D. Nev. 2015). Where an advertiser lacks adequate substantiation evidence, they necessarily lack any reasonable basis for their claims and the ad is deceptive as a matter of law. *Direct Mktg. Concepts, Inc.*, 624 F.3d at 8. In determining whether an advertiser has satisfied the reasonable basis requirement, the Commission or court must first determine what level of substantiation the advertiser is required to have for his advertising claims. Then, the adjudicator must determine whether the advertiser possessed that level of substantiation." *Pantron I Corp.,* 33 F.3d at 1096; *John Beck Amazing Profits, LLC*, 865 F. Supp.2d at 1067.

Under FTC guidance to advertisers of dietary supplements, claims about the efficacy of dietary supplements must be supported by "competent and reliable scientific evidence," which the

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FTC defines as "tests, analyses, research, studies or other evidence, based on the expertise of professionals in the relevant area, that have been conducted and evaluated in an objective manner by persons qualified to do so, using procedures generally accepted in the profession to yield accurate and reliable results. *See* FEDERAL TRADE COMMISSION, *Dietary Supplements: An Advertising Guide for Industry* (2001*), at* https://www.ftc.gov/system/files/documents/plain-language/bus09-dietary-supplements-advertising-guide-industry.pdf (last accessed October 7, 2016), at 9. The FTC lists a number of factors (known as the *Pfizer* factors) to considering the appropriate amount and type of substantiation:

- **The Type of Product.** Generally, products related to consumer health or safety require a relatively high level of substantiation.
- **The Type of Claim.** Claims that are difficult for consumers to assess on their own are held to a more exacting standard. Examples include health claims that may be subject to a placebo effect or technical claims that consumers cannot readily verify for themselves.
- **The Benefits of Truthful Claims and The Cost/Feasibility of Developing Substantiation for the Claim.** These factors are often weighed together to ensure the valuable product information is not withheld from consumers because the cost of developing substantiation is prohibitive. This does not mean, however, that an advertiser can make any claim it wishes without substantiation, simply because the cost of research is too high.
- **The Consequences of a False Claim.** This includes physical injury, for example, if a consumer relies on an unsubstantiated claim about the therapeutic benefit of a product and foregoes a proven treatment. Economic injury is also considered.
- **The Amount of Substantiation that Experts in the Field Believe is Reasonable.** In making this determination, the FTC gives great weight to accepted norms in the relevant fields of research …. Where there is an existing standard for substantiation developed by a government agency or other authoritative body, the FTC accords great deference to that standard.

Id. at 8-9. A guiding principle for determining the amount and type of evidence needed is what experts in the relevant area of study would consider to be adequate. *Id.* at 10. The FTC will look at the amount and type of substantiation. For example, the most reliable evidence comes from well-controlled human clinical trials. *Id.* It will look at the quality of the evidence by examining the validity of the methodology used in any clinical trials. *Id.* at 12. The FTC cautions advertisers not to rely on the fact that a study was published as proof of scientific reliability without assessing

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the quality of the research. *Id.* The FTC also requires that advertisers of dietary supplements consider the totality of the scientific evidence and not cherry pick the studies that support their claims and ignore conflicting study results. Finally, the studies on which an advertiser is relying must be relevant to the claims being made in ads:

> Therefore, advertisers should ask questions such as: How does the dosage and formulation of the advertised product compare to what was used in the study? Does the advertised product contain additional ingredients that might alter the effect of the ingredients in the study? Is the advertised product administered in the same manner as the ingredient used in the study? Does the study population reflect the characteristics and lifestyle of the population targeted by the ad? If there are significant discrepancies between the research conditions and the real life use being promoted, advertisers need to evaluate whether it is appropriate to extrapolate from the research to the claimed effect."

Id. at 16. "Claims that do not match the science, no matter how sound that science is, are likely to be unsubstantiated." *Id.*

3. Materiality

Implicit in the term "deceptive" in the CPA is "the understanding that the actor misrepresented something of material importance." *Hiner v. Bridgestone/Firestone, Inc.,* 91 Wn. App. 722, 730, 959 P.2d 1158 (1998), *rev'd on other grounds,* 138 Wn.2d 248, 978 P.2d 505 (1999); *Stephens v. Omni Ins. Co.*, 138 Wn. App. 151, 166, 159 P.3d 10, 18–19 (2007), *aff'd sub nom. Panag v. Farmers Ins. Co. of Washington*, 166 Wn. 2d 27, 204 P.3d 885 (2009). Express claims, deliberately implied claims, and claims that "significantly involve health," are presumed material. *Kraft, Inc. v. F.T.C.*, 970 F.2d 311, 322-3 (7th Cir. 1992); *F.T.C. v. COORGA Nutraceuticals Corp.*, 2016 WL 4472994, at *3 (D. Wyo. 2016). A presumption of actual reliance by consumers arises once the State proves that the defendant made material misrepresentations, that they were widely disseminated, and that consumers purchased the defendant's product. *F.T.C. v. Figgie Int'l, Inc.*, 994 F.2d 595, 605 (9th Cir. 1993).

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F. ANALYSIS

1. Living Essentials' Vitamin Claims are not deceptive.

Living Essentials' claims that that B vitamins promote energy and amino acids promote alertness and focus are not deceptive. Nutritional science supports the general proposition that the vitamins and nutrients in 5-Hour ENERGY® are physiologically beneficial, even to healthy, well-nourished adults. They support metabolism which affects energy. They can help reduce fatigue. They can help increase blood flow to the brain and support the generation of neurotransmitters, which can affect alertness and focus. Dr. Kennedy's testimony regarding the general health benefits of B vitamins, choline, taurine, and L-tyrosine, was compelling and credible. Dr. Sanford Bigelow testified credibly that the dosages found in 5-Hour ENERGY® are sufficient in quantity to provide the claimed benefits. There is adequate scientific substantiation predating July 2012 to support Living Essentials' claim that the vitamins and nutrients in 5-Hour ENERGY® help promote energy, alertness and focus. For this reason, the Court finds that the State has not established that Living Essentials' Vitamins Claims violated the CPA.

2. Living Essentials' Superior to Coffee Claims are deceptive.

Living Essentials, however, claims that the B vitamins and amino acids do not just promote energy, alertness and focus. Living Essentials also claims that these vitamins and amino acids work *synergistically* with caffeine (or interacts with caffeine) to enhance the *duration* of the energy, alertness and focus derived from caffeine.[7] This is the takeaway of the Superior to Coffee Claims. Living Essentials advertised that the combination of caffeine, B vitamins and amino acids would provide energy that would last longer than consumers would experience from a cup of premium coffee (and in some of the ads, longer than 3 or 4 cups of coffee).

[7] Although some of the studies suggest that caffeine does not improve episodic memory, and that 5-Hour ENERGY® provides some improvement in this area, none of Living Essentials' ads claim such a benefit from the product. Carl Sperber testified that he was not even aware of what "episodic memory" was. He certainly did not use these words in any Living Essential ads. These studies are thus irrelevant to the Court's analysis.

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While the Court finds competent and reliable scientific evidence that caffeine in 5-Hour ENERGY® is probably interacting with its B vitamins, taurine, glucuronolactone, and other non-caffeine ingredients, the Court cannot find that this evidence supports the specific benefit Living Essentials is claiming. Dr. Kennedy's summary of the scientific literature does show some different physiological results from caffeine plus vitamins or caffeine plus amino acids, but the results are not the benefits touted by Living Essentials. The Giles study, for example, actually supports the proposition that taurine *counteracts* the caffeine, rather than enhancing its effects. The studies do not clearly establish that 5-Hour ENERGY®'s vitamins and nutrients work synergistically with caffeine to make these benefits last longer than they would last with caffeine alone.

As set out in the FTC dietary supplement guidelines, the substantiation must be relevant to the claimed benefits. None of the studies Living Essentials submitted to the Court support the claim that combining specific B vitamins, taurine, choline, glucuronolactone and tyrosine with caffeine will cause the energy, alertness and focus effects of caffeine to last longer than if the caffeine were consumed alone. Neither Glade nor NERAC examined this issue. The only corporate representative to testify regarding the substantiation Living Essentials relied on when airing its ads was Carl Sperber. Sperber cited the Medicus Study as the only substantiation he was aware of, other than his own Internet research. But the Medicus study had no separate caffeine arm against which to compare 5-Hour ENERGY®.

At trial, Living Essentials presented several studies on which it now relies to substantiate its Superior to Coffee Claims. Living Essentials points to the 2013 Nagrecha Study, the 2015 Molnar Study and the 2015 Paulus Study. The Court has reviewed each study presented and the testimony of the experts regarding these studies and finds none that are sufficiently relevant to substantiate the Superior to Coffee Claims. The Nagrecha study has limited relevance because its test subjects underwent only one round of testing 40 minutes after ingesting the caffeine/choline

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drink. There is no data in the Nagrecha study to indicate that adding choline to a caffeinated drink extends the benefits of caffeine past that 40 minute mark.

The 2015 Paulus study compared 5-Hour ENERGY® to a Starbucks DoubleShot and to caffeine by itself. In his tests, Paulus found that the 5-Hour ENERGY group outperformed the other two groups. But the Court finds the methodological problems, specifically the lack of blinding of the participants and lack of other controls, to be significant enough to render the Paulus Study results unreliable.

The 2015 Molnar Study comes the closest. Molnar found a significant improvement in endothelial function (blood flow) 1 ½ and 4 hours after the subjects consumed 5-Hour ENERGY® and Red Bull, and no similar improvement in endothelial function was seen for those ingesting NOS or coffee. Dr. Blonz testified that the Molnar study was not relevant to the claims Living Essentials was making in the ads because Molnar did not test cognitive functioning to evaluate energy, alertness and focus. Molnar was merely looking at endothelial function as a proxy for coronary function. Dr. Kennedy disagreed and testified that endothelial function is a measure of how well the body is delivering blood on demand to the brain. In Dr. Kennedy's opinion, the more blood delivered to the brain, the better the cognitive functioning. But the Bloomer study concluded that neither caffeine nor 5-Hour ENERGY® resulted in an improvement in subjective feelings of energy or mood or in objective cognitive performance, seeming to undercut the reasonability of relying on Molnar as substantiation for Living Essentials' claims.

Ultimately, the question the Court confronts is whether the Molnar study, by itself, suffices to substantiate the efficacy claims Living Essentials made in ads years before the study was published and whether it now suffices to justify these claims. Dr. Beales opined that very little substantiation should be required because "there is not very much at stake for consumers" under the factors set out in *Pfizer, Inc.*, 81 F.T.C. 23, 62 (1972). The Court rejects this opinion. Because the Court finds that Living Essentials' ads relate to consumer health, the Court concludes that the

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better approach is that set out in the FTC dietary supplement guidelines: "Generally, products related to consumer health or safety require a relatively high level of substantiation."

After careful consideration, the Court finds that Living Essentials lacked adequate competent and reliable scientific evidence to make the Superior to Coffee Claim. First, Dr. Kennedy admitted that there is no study that has looked at the effects of the combination of ingredients in 5-Hour ENERGY® on energy, alertness and focus as compared to caffeine. He also conceded that there is no evidence that the addition of multivitamins, taurine, or glucuronolactone to a caffeinated energy drink will cause greater improvement in physical and cognitive performance that can be attributed to the effects of caffeine alone. As he testified, "At this stage, we don't know which of the other micronutrients [or] the other bioactives [] interact with caffeine." He opined that a number of different non-caffeine ingredients in 5-Hour ENERGY® **could be interacting** to extend one's energy, alertness and focus, but there are studies that support this hypothesis and there are studies that undermine it.

Second, caffeine may not improve endothelial function for as long as 5-Hour ENERGY® does. It does not necessarily follow, however, that caffeine's impact on cognitive performance ends when its impact on endothelial function ends. Dr. McLellan testified that caffeine can cross the blood/brain barrier and, because of its half-life, remains in and affects cognitive performance for a significant period of time. Living Essentials is claiming that 5-Hour ENERGY® works *better than caffeine alone in sustaining energy, alertness and focus over several hours*. This claim is certainly plausible, given the science presented to the Court, but it remains a hypothesis, not an established scientific fact.

The Court finds that the Superior to Coffee claims were express claims and are thus material under the CPA. The ads expressly state that people who drink 5-Hour ENERGY® will experience hours of energy, alertness and focus because the vitamins and nutrients extend the effects of caffeine. There is insufficient scientific evidence to support this express health-related claim. The Superior to Coffee Claims are thus materially misleading.

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For these reasons, Living Essentials violated the CPA when it aired or disseminated ads that expressly or impliedly stated that the energy, alertness and focus derived from 5-Hour ENERGY® will be greater than or last longer than any similar physiological benefits derived from coffee.

3. The Decaf ads are deceptive.

The Court finds that Living Essentials lacks competent and reliable scientific evidence to claim that Decaf 5-Hour ENERGY® will generate energy and alertness that "lasts for hours."[8] Dr. Bigelow testified that Living Essentials acted reasonably in relying on the 2010 Glade Report and the 2007 NERAC Report to substantiate this decaf claim. The Court does not find this testimony credible. Dr. Glade relied on taurine studies that demonstrated that daily dietary supplementation of taurine in 3000 mg or more increased metabolizable energy that could last for at least four hours. Decaf 5-Hour ENERGY® contains only 483 mg of taurine. The FTC guidelines on dietary supplements specifically cautions advertisers from relying on studies the conclusions of which are based on very different dosages. Such is the case here with the taurine studies on which Dr. Glade relied. Dr. Glade also cited studies for the proposition that the daily intake of between 6 mcg and 5000 mcg of B_{12} supports the production of energy within 2 hours of consumption and for 12 to 24 hours after consumption.

Dr. Kennedy testified that the 2015 Shah Study demonstrated that both caffeinated and decaffeinated energy drinks "significantly" boosted energy level one hour after consumption. But the chart on which Dr. Kennedy relies (Ex. 2254, slide 65) actually shows that the decaf energy level test results at the 3 hour mark were *not* statistically significant. And the 2013 Kurtz study also found that consumers drinking Decaf 5-Hour ENERGY® experienced no energy benefits from the ingredients in the drink.

[8] The Court dismissed the State's challenge to representations in Exhibit 641 as non-actionable on Living Essentials' CR 41(b)(3) motion.

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While there is competent and reliable scientific evidence to support a claim that the Decaf 5-Hour ENERGY® shot may provide a short-term benefit in terms of energy, the science is insufficient to substantiate the claim that this benefit will endure over a five hour period.

For this reason, the Court finds the Decaf Claims to be materially misleading and a violation of the CPA.

4. The "No Crash" ads are not deceptive.

The State contends that Living Essentials claims that consumers will experience no sugar or caffeine crash after drinking 5-Hour ENERGY. The main problem with the State's allegation is that there appears to be no accepted meaning of the word "crash" when applied to energy drinks. Dr. Pratkanis testified that the phrase "crash feeling" is left open to the consumer to interpret any way they feel in their experience. Dr. Blonz interpreted the term "crash" as a non-scientific term dealing with caffeine withdrawal effects.

By 2007, Living Essentials began to use the phrase "no crash" to mean "no sugar crash," or the absence of the sudden feeling a consumer may experience following ingestion of sugar (which 5-hour ENERGY® does not contain). Because there is no sugar in 5-hour ENERGY®, a person will not experience a "crash" relating to a drop in glucose levels after consuming the 5-hour ENERGY® products. Each of Living Essentials' ads referencing "crash" after July 17, 2012 contained an asterisk directing consumers to a statement that "no crash means no sugar crash," or contained only the language "no sugar crash."

The Court rejects Dr. Blonz's theory that the term "crash" in the 5-hour ENERGY® advertisements refers to feelings of fatigue or tiredness that a person who is habituated to caffeine may experience after not having had caffeine for a certain period. There is no empirical evidence for the existence of a caffeine-related crash. Habituation does not develop after a single ingestion of caffeine, and a caffeine-related "crash" is physiologically implausible because of caffeine's half-life. Dr. Blonz cited no studies showing evidence of a "caffeine crash."

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The State has failed to establish that Living Essentials' "no crash" claims are misleading or deceptive under the CPA.

5. The Ask Your Doctor Ads were deceptive under the CPA.

The Court finds that the net impression from the AYD ads was that a substantial majority of doctors believe 5-Hour ENERGY® is a safe and effective nutritional supplement that they would recommend to their patients. While the statistics displayed in the ads and the words used in the ad were *literally* true, the impression left by the ads was not. Dr. Anthony Pratkanis, an expert in the science of consumer behavior and persuasion tactics, testified credibly that the clear takeaway from these ads was that "doctors would recommend" 5-Hour ENERGY®. The Court agrees.

First, Sperber testified that when he developed the script, he wanted to allay consumers' concerns about the safety or nutritional value of 5-Hour ENERGY® by indicating that doctors would recommend the product. Neither of the surveys (Ex. 436; Ex. 627) asked physicians if they thought 5-Hour ENERGY® was healthy or safe. Instead, the doctors were informed that 5-Hour ENERGY® low fat, low calorie, low sodium, sugar-free drink. The survey then asked if the physicians would recommend 5-Hour ENERGY® for healthy patients who already use energy supplements:

> Based on the information you just read about 5-hour ENERGY®, would you recommend 5-hour ENERGY® for healthy patients who use energy supplements?
>
> ☐ Yes
> ☐ No
> ☐ Don't know/not sure

Dr. Pratkanis testified that the survey questions were biased, leading, and designed to elicit a limited response. Due to the phrasing of the questions that preceded this question, a "no" response to this question suggested that the responding doctor would instead recommend a high fat, high calorie, or high sodium energy supplement, rather than allowing doctors the option of saying they do not recommend energy supplements at all. It is thus not surprising that 47 percent

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of the doctors responding to the online survey responded in the affirmative, and 74 percent of the doctors responding to the paper survey responded in the affirmative.

Second, the statistics Living Essentials presented in the ads ("over 73%") were the results of the online survey of 503 doctors, but the reference to "3,000 doctors" was a combination of both surveys. Although the statistics in the AYD ads were technically an accurate depiction of the online survey, the statistics presented in the ad were only accurate for responses from 503 doctors, not for responses from 3,000 doctors, as the ads state. The Court finds credible Dr. Pratkanis's testimony that the survey methods used for the online survey and the paper survey differed so dramatically that the surveys could not reasonably be combined and represented as the same survey. The 2,600 doctors who participated in the paper survey were not randomly selected. They were specifically chosen by sales representatives making sales calls on doctors' offices. Yet, the company presented the statistics in a way that would lead a reasonable viewer to believe that 73% of 3,000 doctors surveyed would recommend this product to their patients.

Living Essentials argues that even if the ads were not accurate, they were not materially misleading. They presented Dr. Christopher Stomberg, an expert on econometrics (the application of statistics to economic questions) who testified that the online survey statistic results contained in the AYD ads were accurate and representative of the opinions of primary care doctors across the United States. Living Essentials argues that because the survey results were representative of what 3,000 randomly selected primary care doctors would have said had they been surveyed in a scientifically valid manner, the ads cannot be found to be misleading in any material way.

G. CONCLUSIONS OF LAW

Based on the analysis set out above, the Court concludes the following:

1. The State failed to prove that Living Essentials violated the Consumer Protection Act when it aired or published ads that indicated that the non-caffeine ingredients in 5-Hour ENERGY® promote energy, alertness and focus.

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2. Living Essentials violated the Consumer Protection Act when it aired or published ads that represented that the energy, alertness and focus from 5-Hour ENERGY® lasts longer than a cup of coffee because of the synergistic or interactive effects of caffeine, B vitamins and nutrients in the product.

3. Living Essentials violated the Consumer Protection Act when claimed in a press release and on its web site that Decaf 5-Hour ENERGY® will provide energy, alertness and focus that lasts for hours.

4. The State failed to prove that Living Essentials violated the Consumer Protection Act when it aired or published its "no crash" ads.

5. Living Essentials violated the Consumer Protection Act when it aired the Ask Your Doctor ads.

At trial, the parties agreed to postpone a remedy phase of the proceeding until the Court issued this decision. The parties shall contact the Court's bailiff to schedule a status conference in this matter.

DATED this 7th day of October, 2016.

_____
Honorable Beth M. Andrus
King County Superior Court

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Case Title: WASHINGTON STATE OF VS LIVING ESSENTIALS ET ANO

Document Title: ORDER MEMORANDUM DECISION

Signed by: Beth Andrus
Date: 10/10/2016 9:00:00 AM

Beth M. Andrus

Judge/Commissioner: Beth Andrus

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