

**BBB NATIONAL PROGRAMS**

***THE DIRECT SELLING SELF-REGULATORY COUNCIL***

The Juice Plus+ Company, LLC

Case No. 115-2023

Filed: 5/12/23

**NGO Inquiry**

**I. Company Description**

The Juice Plus+ Company, LLC (“Juice Plus+” or the “Company”) is a direct selling company founded in 1970 and based in Collierville, Tennessee. The Company markets fruit and vegetable juice extract supplements.

**II. Basis of Inquiry**

The Direct Selling Self-Regulatory Council (“DSSRC”) is a national advertising self-regulation program administered by BBB National Programs. Pursuant to section V(A) of DSSRC’s Policies & Procedures, any person or legal entity may provide to DSSRC a written submission regarding any earning claims or product claims disseminated by or on behalf of a direct selling company which such person or legal entity believes should be modified or discontinued.

In this instance, a non-governmental advocacy group (“NGO”) identified to DSSRC certain core earnings and product performance claims disseminated in certain communications by salesforce members of the Company, and, in some instances, by the Company, that the NGO believes overstated the efficacy of Juice Plus+ products as well as the amount of income that can be generally expected by salesforce members participating in the Company’s business opportunity.

More specifically with respect to product claims, the NGO contended that Juice Plus+ and its salesforce members have been disseminating deceptive and unsubstantiated disease-treatment claims to market products, including the ability of the products to protect against a number of serious health-related conditions.

The NGO also questioned the relevancy and reliability of the studies referenced on the Juice Plus+ website which, according to the Company, supported the health-related claims communicated on social media.

DSSRC identified the following representative claims in its Notice of Inquiry while also asking Juice Plus+ to address product performance and income claims that were communicated in social media posts that the NGO had archived in its online database:<sup>1</sup>

### Product Performance Claims

- This isn't a new thing that I do, starting my day off with 30 fruits + veggies is something that I've been doing for the last three years. Why do I do this?! So happy you asked! Here is the short list:
  - Improved blood pressure
  - slower resting heart rate
  - improved insulin response
  - stronger nails, skin, hair and clearer skin
  - less gum bleeding and overall improved dental health
  - stronger immune response
  - decreased inflammation
  - better sleep
  - less brain fog
  - improved recovery



<sup>1</sup> The NGO aggregated more than 100 examples of purported disease-treatment claims used to market Juice Plus+ products on the NGO's online database.

- “...[A]t the age of 14, I developed an eating disorder that I struggled with for over 20 years. ...So at the age of 33, my health was a mess. My hair was coming out in globs, I was sick all the time, I had horrible seasonal allergies, but the biggest burden I ever had to carry was being told I couldn’t have kids. I didn’t have a menstrual cycle for three years. ...So when a dear friend introduced me to Juice Plus+, it was an absolute God send...Within two months on the trio capsules and Complete shakes, I started that menstrual cycle that I didn’t have for three years. In four years, I’ve been sick once, I no longer have seasonable allergies, ... and as you can see, we have two beautiful healthy Juice Plus+ babies I was told I couldn’t have. ... This opportunity has afforded my family to pay off over \$50,000 of debt in less than a year, become completely debt-free, and just this month, on October the 2nd, we moved into our brand new home.”
- “[After Juice Plus+] 66% were visiting the doctors less[,] 60% were missing fewer days of school[,] 56% were taking fewer over-the-counter and/or prescription drugs”
- “...this actually can reduce the risks of heart attack and stroke...”
- “Every single produce in Juice Plus+ is anti-inflammatory. Inflammation is the gateway to every sickness and disease.... If we knew that we could eat our way out of sickness and disease, we would do it. So, this is telling me that we can do it.”
- “...it’s the only product on the market that has research behind it showing that it actually gets into the bloodstream and supports a healthy pregnancy, decreases complications and premature deliveries...”
- “improved blood pressure...improved insulin response...decreased inflammation...”
- “Two of [my daughters] have Muscular dystrophy and the pulmonologists say they should have had pneumonia and certainly the flu many times throughout their lives but because of our awareness about diet as well as giving them Juice Plus+ since they were eight months old, they’ve never had pneumonia and they’ve had the flu twice in their lives and recovered really strongly...”
- “Chronic inflammation is what leads to chronic diseases, as well as being part of autoimmune issues, allergies, asthma.... And Juice Plus+ ...within two weeks it lowers inflammation.”



Earnings Claims:

- “I said yes to helping others earn a supplemental income from home...I said yes to becoming debt free.”
- “we have four children... that’s not cheap and so it is a means to provide for our family and a means for me to support our family’s bottom line and expenses and ... give our children opportunities that we may not otherwise be able to give them.”

**III. Company’s Position**

According to the Company, Juice Plus+ is whole food-based nutrition including juice powdered concentrates from 25 different fruits, vegetables and grains and helps bridge the gap between what individuals should eat and what they do eat every day.

Juice Plus+ stated that the Company prides itself on presenting both its products and its business opportunity to consumers in an honest, authentic way, by taking great efforts to not only train its salesforce members, but to also monitor the online activities of Juice Plus+ salesforce members to ensure they reflect the Company’s values and intentions.

Upon receipt of the DSSRC Notice of Inquiry, Juice Plus+ informed DSSRC that it conducted a full review of each social media post identified by the NGO. The Company confirmed that 71 of the social media posts have been removed (including all posts which contained the earnings claims at issue) while noting that it did not receive

responses from 5 salesforce members to Company requests to remove the social media posts in question. The Company informed DSSRC that it did not take action on 36 social media posts because there were no substantive claims at issue or the posts were not a violation of the Company's Rules of Operation.

Juice Plus+ maintained that certain of its product performance claims are supported by more than 40 peer-reviewed scientific publications from clinical studies on the products themselves (the majority of studies being randomized clinical trials) and not solely on individual ingredients in the products and those studies have been published in peer-reviewed scientific journals, which provides confirmation of the scientific merit of the findings by other experts in the field. The Company also noted that citations to all of its studies are made available of the Juice Plus+ website.

#### A. Juice Plus+ Health Start Study

Juice Plus+ provided DSSRC with the questionnaire and testing protocol for its Juice Plus+ Health Start Study that was referenced prominently in several of the posts at issue in this inquiry.

The Juice Plus+ Health Start Study consists of over 1.5 million participating families and nearly 20 years of results. Participants in the study received Juice Plus+ capsules (or chewables)– free of charge – for up to four years and the children that participated were between 4 and 18 years old. At the outset of the study, parents were given the option to fill out an enrollment questionnaire that includes a series of close-ended questions asking about the child's diet (e.g., how many carbonated soft drinks and/or high-sugar children's beverages would you say the child drinks on average each day?), health (e.g., does the child currently take any prescription medication(s) on a regular basis?) and school attendance (e.g., during the current or last completed school year, how many days of school did the child miss for health-related reasons, including illnesses and doctor visits?).

Following their use of the Juice Plus+ product, participants were provided with a follow-up survey that included more closed ended questions regarding their observations of the child's diet (e.g., have you seen any change in the number of carbonated soft drinks and/or high sugar children's beverages you would say the child drinks on average each day?), health (e.g., has there been any change in the number and/or amount of prescription medication(s) your child takes on a regular basis?) and school attendance (e.g., Has there been any change in the amount of school days the child has missed for health-related reasons, including illnesses and doctor's visits since taking Juice Plus+?).

According to Juice Plus+, the results of the study indicated that parents have reported that 60% of children missed fewer days of school, 56% were taking fewer over-the-counter (OTC) or prescription drugs, 66% of children were visiting the doctor less, 71% of children were consuming less fast food and soft drinks and, 61% of children were consuming more fruits and vegetables.

#### B. Specific Product Performance Claims

- *Bioavailability*

Juice Plus+ stated that for a nutritional product to be effective, it must enter the circulatory system. The Company called DSSRC's attention to more than 20 scientific papers that have been published over 25 years which Juice Plus+ contended demonstrates that Juice Plus+ Essentials Capsules effectively increase blood levels of micronutrients — including vitamins, carotenoids, and polyphenols — in children as well as in young, middle-aged, and elderly adults.

- *Dental health*

Juice Plus+ explained that healthy gums are important to protect the tooth root and the underlying bone and that healthy gums also provide an important barrier between the mouth and the rest of the body. Juice Plus+ referred DSSRC to one study which concluded that Juice Plus+ Essentials Capsules, when added to standard deep-cleaning treatment, support gum health and decrease gum bleeding and plaque accumulation above and beyond the effects of the cleaning alone.<sup>2</sup>

A second study provided by JuicePlus+ evaluated the effect of pre-operative supplementation with JuicePlus+ on postoperative morbidity and quality of life. The testing data indicated that treatment subjects experienced a reduction in mouth opening and were less likely to experience postoperative pain in the days following surgery.<sup>3</sup>

- *Cardiovascular Health*

According to the Company, combined results of multiple studies show Juice Plus+ Essentials Capsules help maintain blood pressure, total cholesterol, LDL cholesterol, and homocysteine (a biomarker for cardiovascular health) levels that are already within a healthy range.<sup>4</sup> The Company stated that Juice Plus+ Essentials Capsules have also been

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2 Chapple, I. L., et al. (2012). "Adjunctive daily supplementation with encapsulated fruit, vegetable and berry juice powder concentrates and clinical periodontal outcomes: a double-blind RCT." *J Clin Periodontol* 39(1): 62-72.

3 Gorecki, P., et al. (2018). "Perioperative supplementation with a fruit and vegetable juice powder concentrate and postsurgical morbidity: A double-blind, randomized, placebo-controlled clinical trial." *Clin Nutr* 37(5): 1448-1455.

4 Panunzio, M. F., et al. (2003). "Supplementation with fruit and vegetable concentrate decreases plasma homocysteine levels in a dietary controlled trial." *Nutrition Research* 23(9): 1221-1228; Kawashima, A., et al. (2007). "Four week supplementation with mixed fruit and vegetable juice concentrates increased protective serum antioxidants and folate and decreased plasma homocysteine in Japanese subjects." *Asia Pac J Clin Nutr* 16(3): 411-421; Houston, M. C., et al. (2007). "Juice powder concentrate and systemic blood pressure, progression of coronary artery calcium and antioxidant status in hypertensive subjects: a pilot study." *Evid Based Complement Alternat Med* 4(4): 455-462, and Novembrino, C., et al. (2011). "Effects of encapsulated fruit and vegetable juice powder concentrates on oxidative status in heavy smokers." *J Am Coll Nutr* 30(1): 49-56.

found to support the normal, healthy elasticity of the arteries and to blunt the effects of a high-fat meal on vasodilation.<sup>5</sup>

- *Cognitive Functioning*

Juice Plus+ provided DSSRC with a study which evaluated effects of improvements in cognitive function in healthy people who ingested a preparation based on micronized fruit and vegetables. The study consisted of one hundred and eight randomized subjects using a control intervention group ( $n = 53$ ) and placebo group ( $n = 55$ ). Volunteers completed the study after two 16-week periods with a 4-week wash-out period between each phase. At the beginning and the end of each phase, volunteers performed industry standard tests for the measurement of different cognitive function patterns. The results revealed statistically significant differences in all of the variables of the tests carried out, especially compared to placebo.

- *DNA Support*

According to Juice Plus+, combined results from six studies show that Juice Plus+ Essentials Capsules protect DNA from oxidation, supporting its structural integrity. Research on nutrition and gene interactions (nutrigenomics) has demonstrated that several genes were changed beneficially after intervention with Juice Plus+. These include genes that affect how the body stores fat, reacts to injury, produces energy, and maintains healthy blood sugar levels.<sup>6</sup>

- *Reduced Inflammation*

Juice Plus+ provided DSSRC with several studies which it contended demonstrated that Juice Plus+ reduced inflammation.

One study evaluated supplementation of Juice Plus+ for 28 weeks and determined that the fruit and vegetable supplementation could influence indicators of oxidative stress,

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<sup>5</sup> Plotnick, G. D., et al. (2003). "Effect of supplemental phytonutrients on impairment of the flow-mediated brachial artery vasoactivity after a single high-fat meal." *J Am Coll Cardiol* 41(10): 1744-1749.

<sup>6</sup> Smith, M. J., et al. (1999). "Supplementation with fruit and vegetable extracts may decrease DNA damage in the peripheral lymphocytes of an elderly population." *Nutrition Research* 19(10): 1507-1518; Kiefer, I., et al. (2004). "Supplementation with mixed fruit and vegetable juice concentrates increased serum antioxidants and folate in healthy adults." *J Am Coll Nutr* 23(3): 205-211; Nantz, M. P., et al. (2006). "Immunity and antioxidant capacity in humans is enhanced by consumption of a dried, encapsulated fruit and vegetable juice concentrate." *J Nutr* 136(10): 2606-2610; Kawashima, A., et al. (2007). "Four week supplementation with mixed fruit and vegetable juice concentrates increased protective serum antioxidants and folate and decreased plasma homocysteine in Japanese subjects." *Asia Pac J Clin Nutr* 16(3): 411-421; Cui, X., et al. (2012). "Suppression of DNA damage in human peripheral blood lymphocytes by a juice concentrate: a randomized, double-blind, placebo-controlled trial." *Molecular Nutrition & Food Research* 56(4): 666-670; Williams, E. J., et al. (2017). "Effects of an Encapsulated Fruit and Vegetable Juice Concentrate on Obesity-Induced Systemic Inflammation: A Randomized Controlled Trial." *Nutrients* 9(2).

immunity, and illness.<sup>7</sup> A second study assessed the effects of 8 weeks of supplementation with Juice Plus+ or placebo, on the markers of oxidation, inflammation and skin capillary microcirculation in 42 obese, pre-menopausal women. Compared with a placebo, 8 weeks of supplementation with Juice Plus+ decreased the markers of systemic oxidation and inflammation. According to the study results, Juice Plus+ supplementation combined with a walking routine improved the markers of microcirculation in the obese women.<sup>8</sup> Another Juice Plus+ study (presented in abstract form), addressed three pointed questions: Can supplementation with a mixed fruit and vegetable concentrate modulate redox homeostasis in exercising people?; Can supplementation with a mixed fruit and vegetable concentrate modulate the immune system of exercising people?; and, How can sport nutrition advisors decide whether or not to supplement with a mixed fruit and vegetable concentrate?<sup>9</sup>

Juice Plus+ also provided a double-blinded, parallel, randomized placebo-controlled trial conducted with 56 obese adults which indicated that supplementation with Juice Plus+ has the potential to improve the metabolic profile of overweight and obese individuals by reducing blood lipid levels and systemic inflammation, as well as by improving body composition. The study administrators concluded that in obese individuals who typically have a low fruit and vegetable intake, a fruit and vegetable concentrate supplementation may be beneficial for improving the metabolic profile, thus reducing the risk of developing chronic inflammatory disease.<sup>10</sup>

Another study relied on by the Company evaluated the effect of polyphenols from plant foods on inflammation and oxidative status and investigated whether treatment with a high-polyphenolic nutraceutical reduces the plasmatic concentration of certain oxidative and inflammatory biomarkers in a healthy population. 92 subjects completed the study after two 16-week treatment periods separated by a four-week washout period. The results revealed statistically significant differences in subjects treated with the fruit and vegetable extract compared to the placebo and concluded that consumption of a nutraceutical-based fruit and vegetable supplement with a high polyphenol content

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7 Lamprecht; Oettl; Hofmann; Greilberger; Schwabegger "Several Indicators of Oxidative Stress, Immunity, and Illness Improved in Trained Men Consuming an Encapsulated Juice Powder Concentrate for 28 Weeks." *The Journal of Nutrition* Volume 137, ISSUE 12, P2737-2741, December 2007.

8 Lamprecht, M., Obermayer, G., Steinbauer, K., Cvirn, G., Hofmann, L., Ledinski, G., . . . Hallstroem, S. (2013). "Supplementation with a juice powder concentrate and exercise decrease oxidation and inflammation, and improve the microcirculation in obese women: Randomised controlled trial data." *British Journal of Nutrition*, 110(9), 1685-1695. doi:10.1017/S0007114513001001.

9 Lamprecht M, Obermayer G, Seebauer W. "Influence of Mixed Fruit and Vegetable Concentrates on Redox Homeostasis and Immune System of Exercising People." In: Lamprecht M, editor. *Antioxidants in Sport Nutrition*. Boca Raton (FL): CRC Press/Taylor & Francis; 2015. Chapter 12. PMID: 26065090.

10 Williams, E.J.; Baines, K.J.; Berthon, B.S.; Wood, L.G. "Effects of an Encapsulated Fruit and Vegetable Juice Concentrate on Obesity-Induced Systemic Inflammation: A Randomised Controlled Trial." *Nutrients* 2017, 9, 116. <https://doi.org/10.3390/nu9020116>.



improved the parameters related to health benefits (oxidative and inflammatory biomarkers), including significant changes in the expression of catecholamines.<sup>11</sup>

Lastly, Juice Plus+ provided a study that explored the efficacy of its fruit berry and vegetable juice powder on low-grade chronic inflammation using a well-established computational systems biology framework of technology and processes (i.e., CytoSolve) that provides the capability to derive molecular mechanisms of action and creates quantitative and predictive models of those mechanisms.<sup>12</sup> The study concluded that Juice Plus+ provides a combination of active ingredients that synergistically affect multiple modalities of low grade chronic inflammation to help improve blood circulation and energy levels, and lower muscle soreness.

- *Improving Hair and Skin Condition*

The Company stated that proper circulation is important for healthy skin by ensuring that nutrients and oxygen get to your skin tissue thus giving it a healthy radiance. According to Juice Plus+, two double-blind, placebo-controlled studies determined that Juice Plus+ Essentials Capsules increase skin micro-circulation. One study, in particular, showed that the Juice Plus+ group increased skin micro-circulation by 39%, while boosting skin hydration, thickness, and density in middle-aged women.<sup>13</sup>

- *Immune System Support*

Juice Plus+ provided four studies on four different populations (healthcare professionals with direct patient contact, young law school students, an elderly population, and athletic men). The Company maintained that the combined results of these studies show that Juice Plus+ Essentials Capsules support the function of the immune system and upper respiratory health.<sup>14</sup>

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11 Arcusa R, Carrillo JÁ, Xandri-Martínez R, Cerdá B, Villaño D, Marhuenda J, Zafrilla MP. "Effects of a Fruit and Vegetable-Based Nutraceutical on Biomarkers of Inflammation and Oxidative Status in the Plasma of a Healthy Population: A Placebo-Controlled, Double-Blind, and Randomized Clinical Trial." *Molecules*. 2021 Jun 12;26(12):3604. doi: 10.3390/molecules26123604. PMID: 34204618; PMCID: PMC8231220.

12 Ayyadurai VAS, Deonikar P, Bannuru RR. "Attenuation of low-grade chronic inflammation by phytonutrients: A computational systems biology analysis. *Clin Nutr ESPEN*. 2022 Jun;49:425-435. doi: 10.1016/j.clnesp.2022.03.010. Epub 2022 Mar 31. PMID: 35623848.

13 Lamprecht, M., et al. (2013). "Supplementation with a juice powder concentrate and exercise decrease oxidation and inflammation, and improve the microcirculation in obese women: randomised controlled trial data." *Br J Nutr* 110(9): 1685-1695; De Spirt S, Sies H, Tronnier H, Heinrich U: An Encapsulated Fruit and Vegetable Juice Concentrate Increases Skin Microcirculation in Healthy Women. *Skin Pharmacol Physiol* 2012.

14 Inserra, P. F., et al. (1999). "Immune Function in Elderly Smokers and Nonsmokers Improves During Supplementation with Fruit and Vegetable Extracts." *Integrative Medicine* 2(1): 3-10; Nantz, M. P., et al. (2006). "Immunity and antioxidant capacity in humans is enhanced by consumption of a dried, encapsulated fruit and vegetable juice concentrate." *J Nutr* 136(10): 2606-2610; Lamprecht, M., et al. (2007). "Several indicators of oxidative stress, immunity, and illness improved in trained men consuming an encapsulated juice powder concentrate for 28 weeks." *J Nutr* 137(12): 2737-2741; Roll, S., et al. (2011). "Reduction of common cold symptoms

- *Lung Function*

As support for claims pertaining to the respiratory benefits of taking Juice Plus+, the Company submitted a double-blind, placebo-controlled study of smokers which found that Juice Plus+ Essentials Capsules support several parameters of healthy lung function, including forced expiratory flow and diffusion capacity. These parameters measure the flow and volume of air entering and exiting the lungs.<sup>15</sup>

#### **IV. Analysis**

Juice Plus+ was responsive to the concerns raised by the NGO in this inquiry and immediately removed or modified those posts which it deemed to be inconsistent with its Company policies. The Company's actions resulted in the removal or modification of over 70 of the 112 posts that were identified by DSSRC to the Company. DSSRC acknowledged the Company's good faith actions which DSSRC determined were necessary and appropriate.

DSSRC next turned its attention to the social media posts that remain publicly available.

Advertisers have the burden to support any reasonable interpretation of the claims that are expressly communicated or implied in its advertising.<sup>16</sup> DSSRC recognizes that Juice Plus+ does not recommend that consumers take Juice Plus+ alone and none of the advertising at issue in inquiry included express claims stating that Juice Plus+ can be used as a substitute for eating fruits and vegetables. However, DSSRC remained concerned that based upon the context in which several of the social media posts were disseminated that it would be reasonable for consumers to take-away the message that the performance benefits conveyed in the advertising could be realized solely by taking Juice Plus+.

Advertisers must possess a "reasonable basis" for claims disseminated in advertising. What constitutes a "reasonable basis" depends on several factors, including, but not limited to, the type of product, the type of claim, the consumer benefit from a truthful claim, and the amount of substantiation experts in the field believe is reasonable.<sup>17</sup>

Here, several of the remaining social media posts at issue reference claims could be considered "health-related." A health-related claim means any commercial statement that expressly or by implication, including "third party" references, written statements,

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by encapsulated juice powder concentrate of fruits and vegetables: a randomised, double-blind, placebo-controlled trial." *Br J Nutr* 105(1): 118-122.

<sup>15</sup> Bamonti, F., et al. (2013). "An encapsulated juice powder concentrate improves markers of pulmonary function and cardiovascular risk factors in heavy smokers." *J Am Coll Nutr* 32(1): 18-25.

<sup>16</sup> FTC Policy Statement Regarding Advertising Substantiation (Nov. 23, 1984), <https://www.ftc.gov/public-statements/1984/11/ftc-policy-statement-regarding-advertising-substantiation>.

<sup>17</sup> *Id.* Also see Pfizer Inc., 81 F.T.C. 23 (1972).

symbols, or vignettes, characterizes the relationship of any substance to a disease or health-related condition. Further, implied health claims include those statements, symbols, vignettes, or other forms of communication that suggest, within the context in which they are presented, that a relationship exists between the presence or level of a substance in the food and a disease or health-related condition.<sup>18</sup>

Generally, health-related claims should be supported by competent and reliable scientific evidence, as defined by the Federal Trade Commission (“FTC”), and includes, “tests, analyses, research, or studies that (1) have been conducted and evaluated in an objective manner by experts in the relevant disease, condition, or function to which the representation relates; and (2) are generally accepted in the profession to yield accurate and reliable results.”<sup>19</sup>

In addition, DSSRC notes that although many of the posts were disseminated by salesforce members and not Juice Plus+, itself, this did not relieve the Company of its responsibility to provide the necessary substantiation for the messages reasonably conveyed to consumers. As stated in the FTC Guide on the Use of Endorsements and Testimonials in Advertising, an advertisement employing endorsements by one or more consumers about the performance of an advertised product or service will be interpreted as representing that the product or service is effective for the purpose depicted in the advertisement. Therefore, the advertiser must possess and rely upon adequate substantiation, including, when appropriate, competent and reliable scientific evidence, to support such claims made through endorsements in the same manner the advertiser would be required to do if it had made the representation directly, i.e., without using endorsements. Consumer endorsements themselves are not competent and reliable scientific evidence.<sup>20</sup>

#### A. *The Juice Plus+ Health Start Study Claims*

Five of the remaining social media posts referenced the Juice Plus+ Health Start Study (a/k/a the “Family Health Study”) and based on the reported results, communicated claims that children taking Juice Plus+ were visiting the doctor less, missing fewer days of school, taking fewer over-the-counter and/or prescription drugs and consuming less fast food and/or prescription drugs.

The aggregated responses of participants in the Health Start Study formed the basis of the Company’s support for several health-related claims communicated by the Company and its salesforce members.

Although characterized as a “study,” DSSRC determined that the Juice Plus+ Health Start Study more closely resembled a consumer survey and did not provide the type of competent and reliable scientific evidence that would be necessary to support the express health claims communicated by the Company and its salesforce members. As a general matter, health claims will require evidence in the form of human clinical testing

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<sup>18</sup> 21 CFR 101.14(a)

<sup>19</sup> See FTC Health Products Compliance Guidance at [https://www.ftc.gov/system/files/ftc\\_gov/pdf/Health-Guidance-508.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/Health-Guidance-508.pdf)

<sup>20</sup> 16 CFR 255.2(a).

to substantiate that the product provides the claimed benefit. However, here, there were no controls or randomization in the administration of the Juice Plus+ Health Start Study, the subjects self-administered the product and there was no indication if the results were statistically significant. In addition, there is no way for DSSRC to determine if the results reported by the participants were solely attributable to the children taking Juice Plus+ or, conversely, if other factors may have contributed to the resulting data.

As noted in the FTC's recently published Health Product Compliance Guidance,<sup>21</sup> "Anecdotal evidence about the individual experiences of consumers, including surveys of consumer experiences, are never sufficient to substantiate claims about the effects of a health product. Even if consumer experiences are genuine, they may be attributable to a placebo effect or other factors unrelated to the product. For the same reason, a healthcare practitioner's observation about the effect of a health product on patients is anecdotal and doesn't provide evidence of a causal relationship. Individual experiences aren't a substitute for scientific research."<sup>22</sup>

While DSSRC agreed that the results of the Juice Plus+ Health Start Study were encouraging and that the company should be permitted to share the results of the data in the appropriate context, DSSRC also determined that the response results of this study provided by consumers would be considered anecdotal evidence and should not be communicated in a way that could be interpreted by consumers as meaning that the stated results are based on reliable, reproducible clinical research rather than responses provided by participants who were given free product. Accordingly, DSSRC recommended that the Juice Plus+ claims that reference results reported in the Health Start Study (i.e., "Less medicine", "fewer doctor visits", fewer school days missed," etc.) should be discontinued in the context in which they were communicated in the advertising at issue.<sup>23</sup>

#### *B. Specific Product Performance claims*

There is little dispute that fruits and vegetables are beneficial to an individual's overall health and include a diverse group of plant foods that vary greatly in content of energy and nutrients. Additionally, fruits and vegetables supply dietary fiber, and fiber intake is linked to lower incidence of cardiovascular disease and obesity. Fruits and vegetables also supply vitamins and minerals to the diet and are sources of phytochemicals that function as antioxidants, phytoestrogens, and anti-inflammatory agents and through other protective mechanisms.<sup>24</sup> According to the Center for Disease Control only 1 in 10 people meet federal fruit or vegetable recommendations,<sup>25</sup> and, thus, a dietary supplementation of fruits and vegetables can help maximize the benefits of the

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<sup>21</sup> See [https://www.ftc.gov/system/files/ftc\\_gov/pdf/Health-Products-Compliance-Guidance.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/Health-Products-Compliance-Guidance.pdf).

<sup>22</sup> *Id* at 14.

<sup>23</sup> For example, in order to help alleviate consumer confusion regarding the nature of the research, DSSRC recommends that Juice Plus+ consider re-positioning the Health Start Study as a "survey" or a "report" which would be much more consistent with the methodology used by the Company used to aggregate the data.

<sup>24</sup> Slavin JL, Lloyd B. "Health benefits of fruits and vegetables." *Adv Nutr.* 2012 Jul 1;3(4):506-16. doi: 10.3945/an.112.002154. PMID: 22797986; PMCID: PMC3649719.

<sup>25</sup> See <https://www.cdc.gov/media/releases/2017/p1116-fruit-vegetable-consumption.html>.

nutrients contained in these foods. As the Company has noted, Juice Plus+ is not intended to *replace* eating your fruits and vegetables but, rather, helps consumers bridge the gap between what they do eat and what they are supposed to be eating every day.

Several of the remaining social media posts include qualifying language indicating that using Juice Plus+ “may” result in or can “help” address a specific health-related benefit. However, when utilizing such language, an advertiser should make sure consumers understand both the extent of the scientific support and the existence of any significant contrary evidence.<sup>26</sup> As the FTC notes in its Health Products Compliance Guidance, “[v]ague qualifying terms are inadequate. For example, it’s not enough to say that the product “may” have the claimed benefit or “helps” achieve the claimed benefit...Thus, consumers may interpret an ad to mean that a product will prevent or reduce the risk of a disease, even if the ad includes language indicating that the science supporting the effect is limited in some way.<sup>27</sup>

Juice Plus+ has provided several studies on the three primary Juice Plus+ products (i.e., Fruit Blend, Vegetable Blend and Berry Blend) and, collectively, the body of research provided by Juice Plus+ indicates that several benefits provided by the product are conferred when Juice Plus+ is used to supplement a conventional diet of fruits and vegetables while making other changes to an individuals’ health profile.

For example, the NGO identified one social media video in which a man discusses changes to his health after using Juice Plus+.<sup>28</sup> As he explains the benefits of Juice Plus+, he also notes that by adding the product to his diet along “with some other health changes in addition to Juice Plus+” his overall health improved. As such, DSSRC determined that this video post was appropriate.

However, DSSRC also determined that several of the remaining posts could be reasonably interpreted by consumers as communicating the message that Juice Plus+ alone (i.e., not in conjunction with an adequate diet of fruit and vegetables) would confer a number of specific health benefits.<sup>29</sup> Accordingly, in the absence of any qualifying language indicating that Juice Plus+ should be used to supplement (i.e., and not replace) a daily intake of fruits and vegetables and a healthy lifestyle, it is incumbent on the Company to provide the requisite proof (i.e., reliable and competent scientific evidence) to support this reasonable interpretation of its claims.

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<sup>26</sup> For example, several of the remaining posts refer to a laundry list of specific health benefits that been observed in research on Juice Plus+ including claims that the product supports immune health, healthy skin, healthy gums, a healthy inflammatory response, lung health in smokers, reduces oxidative stress and contributes to cardiovascular wellness.

<sup>27</sup> *Supra* at 13. Page 9.

<sup>28</sup> <https://www.facebook.com/watch/?v=465278855407930>.

<sup>29</sup> See

<https://www.facebook.com/shelly.feucht.1/posts/pfbid0xsiFLoNSbZEyELqj9TV5Jp5aijtu8KGsTZVbTG6BeGFyctgu63QPjdjm7EWqExal>; <https://www.instagram.com/p/CaPzNF3rFHZ/> and [https://www.instagram.com/p/CYMj5-pr2\\_P/](https://www.instagram.com/p/CYMj5-pr2_P/).

## 1. The Juice Plus+ Research

While collectively, the research on Juice Plus+ provides compelling data about the potential efficacy of the Company's products to deliver valuable nutrients to the body, DSSRC had several reservations about the reliability of the studies to substantiate specific health claims implying that the stated benefits were derived exclusively from the supplementation of Juice Plus+.

As noted by the FTC, a common problem in the substantiation of advertising claims is that an advertiser has valid studies, but the studies don't support the claim made in the advertisement. Advertisers should make sure that the research on which they rely isn't just internally valid, but also relevant to their specific product and to the specific advertised benefit. Therefore, advertisers should ask questions such as:

- How do the dosage and formulation of the advertised product compare to the product used in the study?
- Is the ingredient or combination of ingredients in the advertised product the same as what was used in the study?
- Is the advertised product administered in the same manner as the product in the study?
- How well do the outcomes tested in the study relate to the specific benefits advertised?
- Does the study population reflect the characteristics of the population targeted by the ad?

If there are significant discrepancies between research conditions and the real-life use being promoted, advertisers must evaluate whether it is appropriate to extrapolate the claimed effect from the research.

It's also important that the claims accurately reflect what the research shows. Claims that don't match the research results, no matter how sound that research is, are likely to be deceptive. Thus, advertisers should be careful not to exaggerate the extent, nature, or permanence of the effects achieved in a study.

### *a. Dental Health*

Several of the remaining posts include the claim that "Juice Plus+ supports healthy gums," including one post stating that Juice Plus+ can "improve overall dental health." DSSRC determined that it would not be unreasonable for consumers to interpret these posts as communicating that taking Juice Plus+ alone (i.e., in the absence of any additional fruit or vegetable intake) would provide a meaningful benefits a user's dental health.

As support for these dental health claims, Juice Plus+ provided two studies. The first study, entitled "Adjunctive daily supplementation with encapsulated fruit, vegetable, and berry juice powder concentrates and clinical periodontal outcomes: a double blind

RCT”<sup>30</sup> involved 61 “nutritionally replete” subjects who were assigned into one of three groups: fruit/vegetable group; a fruit/vegetable/berry group or a placebo group. According to the study results, clinical outcomes improved in all groups at 2 months, with additional improvement in probing pocket depth versus placebo for the fruit and vegetable group by a statistically significant difference. Gingival crevicular fluid volumes diminished more in supplement groups than placebo (with the fruit vegetable and berry group demonstrating a statistically significant difference) at 2 months, but not at later times. The percent of bleeding on probing sites (at 5 months) and cumulative plaque scores (at 8 months) were lowered more in the fruit/vegetable group ( $p < 0.05$ ).

A second study entitled “Perioperative supplementation with a fruit and vegetable juice powder concentrate and postsurgical morbidity: A Double-blind, randomized, placebo-controlled clinical trial” evaluated whether taking encapsulated fruit and vegetable juice powder concentrate (Juice Plus+ Fruit and Vegetable Blends) prior to molar surgery could improve patients’ quality of life and morbidity (pain and trismus, also known as lockjaw). A total of 238 adults, aged 18 to 65, were scheduled to have their lower third molars (wisdom teeth) removed. They were randomized to take either Juice Plus+ or placebo capsules for 10 weeks prior to surgery and 1 week afterwards. The study concluded that pre-operative supplementation with a fruit and vegetable supplement may improve postoperative quality of life and reduce surgical morbidity and post-operative complications after surgery.<sup>31</sup>

Although Juice Plus+ is intended to bridge the gap between what individuals should eat and what they do eat, the first study was conducted on “nutritionally replete” subjects, a group that is but one sub-set of the larger target audience for the advertised product. The test results in this study had varying levels of statistical significance for different groups depending upon when the clinical outcome was measured. For example, the fruit vegetable and berry group showed a statistically significant decrease in gingival crevicular fluid volume at 2 months but not at later time intervals.

Moreover, the necessity to corroborate the findings of the study results on a larger testing demographic was noted by the study authors who remarked that “Further studies are necessary to assess such approaches in larger and more diverse populations, employing different supplement and therapeutic regimes. In particular, monotherapy studies (phytonutrient supplementation alone) and studies in nutritionally compromised

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<sup>30</sup> Chapple IL, Milward MR, Ling-Mountford N, Weston P, Carter K, Askey K, Dallal GE, De Spirt S, Sies H, Patel D, Matthews JB. “Adjunctive daily supplementation with encapsulated fruit, vegetable and berry juice powder concentrates and clinical periodontal outcomes: a double-blind RCT.” *J Clin Periodontol.* 2012 Jan;39(1):62-72. doi: 10.1111/j.1600-051X.2011.01793.x. Epub 2011 Oct 17. PMID: 22093005; PMCID: PMC3267052.

<sup>31</sup> Gorecki P, Burke DL, Chapple ILC, Hemming K, Saund D, Pearson D, Stahl W, Lello R, Dietrich T. Perioperative supplementation with a fruit and vegetable juice powder concentrate and postsurgical morbidity: A double-blind, randomised, placebo-controlled clinical trial. *Clin Nutr.* 2018 Oct;37(5):1448-1455. doi: 10.1016/j.clnu.2017.08.004. Epub 2017 Aug 10. PMID: 28866140.

patients are necessary to help build a clearer picture of the clinical impact of antioxidant phytonutrient supplementation upon periodontal and systemic inflammatory status.”

Similarly, while DSSRC recognizes that improvement in postoperative quality of life and a reduction of surgical morbidity and post-operative complications after surgery positively impact certain aspects of dental health, DSSRC was not persuaded that the second study provided the type of reliable and scientific evidence that would be necessary to support the dental health claims as communicated in the broad context in which they were presented in the social media posts. For example, test subjects in the second study were asked to take two capsules twice daily with food which was inconsistent with the amounts administered in the first study (i.e., during which test subjects were administered six capsules of product). While DSSRC recognized the improvements in postoperative quality of life scores for the treatment groups following the trauma experienced by molar surgery, it was concluded that such results did not support claims that using JuicePlus+ supports healthy gums,” or that Juice Plus+ can “improve overall dental health.” More specifically, DSSRC determined that consumer expectation of a broad, general claim that a product improves overall dental health would necessitate more than a demonstration that use of the product reduced post-surgical trauma and would include attributes including but not limited to a reduction of tooth decay and cavities, reducing the occurrence of gum disease, strengthening teeth and promoting healthy tooth enamel and reducing sensitivity in the teeth and gums. However, none of these attributes were measured in the study.

In addition, it was also concluded consumers would understand a claim that a product improves “overall dental health” to encompass many more factors including cleanliness, absence of cavities, tooth decay and gum disease, the strengthening of tooth enamel and overall oral hygiene. As such, it was determined that testing data which addressed only certain aspects of dental health was insufficient to support a broad, general claim that the product improves overall dental health.

Accordingly, DSSRC concluded that the claims communicated by the Company and its salesforce members regarding dental health were not adequately supported as presented in the identified social media posts and DSSRC therefore recommended that the dental health claims should be modified or discontinued in their advertised context.

*b. Cardiovascular Health*

Several of the remaining posts at issue communicate the message that Juice Plus+ “contributes to cardiovascular wellness.”

DSSRC notes that fruits and vegetables have been recommended in dietary guidance because of their high concentrations of dietary fiber, vitamins, minerals, especially electrolytes; and more recently phytochemicals, especially antioxidants. Numerous studies have shown that low intake of fruits and vegetables are associated with chronic diseases such as cardiovascular diseases, blood pressure, hypercholesterolemia,



osteoporosis, pulmonary diseases, respiratory problems as well as mental health.<sup>32</sup> Accordingly, as noted by the Food and Drug Administration statements that address a role of dietary patterns or of general categories of foods such as fruits and vegetables in maintaining good health are considered to be dietary guidance rather than health claims.<sup>33</sup>

Accordingly, DSSRC concluded that claims positioning Juice Plus+ in such a structure function context (i.e., as contributing to cardiovascular wellness) were appropriate. Notwithstanding, as noted earlier in this decision, according to the Company, Juice Plus+ is intended to help bridge the gap between what people should eat and what they do eat every day and, as such, the Company and its salesforce members should not be suggesting to consumers that the Juice Plus+ can be used as a replacement for the recommended daily intake of fruits and vegetables.

DSSRC also noted that the claims regarding Juice Plus+' cardiovascular wellness benefits were presented in various contexts in the remaining posts and was often presented as one of a dozen health benefits provided by using the product. For example, DSSRC reviewed one Instagram post identified by the NGO that consisted of 6 slides. DSSRC determined that 4 of the 6 slides did not contain any substantive references to Juice Plus+. However, one slide featured a list of a number of health benefits that the product could assist with (including a statement that Juice Plus+ "contributes to cardiovascular wellness") some of which DSSRC determined were not reliably supported by the Company's research. DSSRC was also troubled by another slide which showed Juice Plus+ capsules accompanied by language stating: "healing our bodies from the inside out". DSSRC concluded that this claim would be in contravention of the disclaimer on the Company's website indicating that the product "is not intended to diagnose, treat, cure or prevent any disease" and should be removed from the post.

### *c. Cognitive functioning*

Several remaining posts include claims communicating that Juice Plus+ helps improve mood and brain health.<sup>34</sup> In addition, one of the remaining posts communicated the

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<sup>32</sup> Slavin JL, Lloyd B. (2012). "Health Benefits of fruits and vegetables." *Adv Nutr*, 3( 4): 506–16; Adebawo O, Salau B, Ezima E, et al. (2006). "Fruits and vegetables moderate lipid cardiovascular risk factor in hypertensive patients." *Lipids Health Dis*, 5: 14.; Park HM, Heo J, Park Y. (2011). "Calcium from plant sources is beneficial to lowering the risk of osteoporosis in postmenopausal Korean women." *Nutr Res*, 31: 27–32.; Williamson G. (1996). "Protective effects of fruits and vegetables in the diet." *J Nutr Food Sci*, 96 ( 1): 6–10. ; 5. Celik F, Topcu F. (2006). "Nutritional risk factors for the development of chronic obstructive pulmonary disease (COPD) in male smokers." *Am J Clin Nutr*, 25( 6): 955– 961.

<sup>33</sup> <https://www.fda.gov/food/food-labeling-nutrition/label-claims-conventional-foods-and-dietary-supplements>.

<sup>34</sup> <https://www.instagram.com/p/Cc5wrOmu0p/>; <https://www.instagram.com/p/CgCslspusZI/>; <https://www.instagram.com/p/Cdx-ZwAlt4B/>; <https://www.facebook.com/shelly.feucht.1/posts/pfbid0xsiFLoNSbZEyELqj9TV5Jp5aijtu8KGS7ZVbTG6BeGFyctgu63QPjdim7EWqExal>

message that the product can be used to help with mood and depression, however, there has been no evidence provided by the Company demonstrating that using Juice Plus+ can alleviate depression, specifically, or improve mood.

The one study provided by Juice Plus+ to support improvements in cognitive functioning had a large sample size (92 subjects) and indicated statistically significant improvements in the processes involved in executive functions such as working memory (ability to plan, alternation and fluidity of the motor response) and short-term memory. However, although the study showed statistically significant improvements over the control group in these working memory tasks, DSSRC concluded that these results in this one study did not support a general (i.e., “brain fog”) and long-term memory improvement claim as these specific types of memory and cognitive functioning were not evaluated.<sup>35</sup>

In sum, DSSRC concluded that this one study, by itself, did not meet the standard of reliable and competent scientific evidence necessary to support health-related claims pertaining to alleviating brain fog, depression and improvement in mood. Accordingly, DSSRC recommended that any such broad cognitive improvement claims be discontinued.

#### *d. DNA Support*

Several remaining posts included claims that Juice Plus+ can help with cellular health and help protect and maintain healthy DNA. In its evaluation of these posts, DSSRC again noted the omission of language indicating that the benefits of Juice Plus+ in maintaining DNA health are optimized when supplementing a diet that includes consumption of fruits and vegetables, and, thus, it would be reasonable for consumers to interpret the Company’s claims as communicating that taking Juice Plus+ alone (i.e., as a substitute for consuming fruits and vegetables) would result in maintaining DNA integrity, a message that has not been supported.

The six studies provided by Juice Plus+ were each conducted on various groups of individuals i.e., elderly subjects, obese subjects, middle aged subjects, law students and subjects of Japanese descent. Collectively, the studies did demonstrate a reduction in cellular DNA damage. However, the size of the studies varied from 20 subjects in one study<sup>36</sup> to 106 subjects in another<sup>37</sup> and the dosing of the products in the six tests

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<sup>35</sup> For example, forgetting where one left one’s keys is an example of a different type of memory failure, unrelated to working memory, the type of memory tested.

<sup>36</sup> *Supra at 7*. "Supplementation with fruit and vegetable extracts may decrease DNA damage in the peripheral lymphocytes of an elderly population." *Nutrition Research* 19(10): 1507-1518; Kiefer, I., et al. (2004). "Supplementation with mixed fruit and vegetable juice concentrates increased serum antioxidants and folate in healthy adults." *J Am Coll Nutr* 23(3): 205-211; Nantz, M. P., et al. (2006).

<sup>37</sup> *Id.* "Suppression of DNA damage in human peripheral blood lymphocytes by a juice concentrate: a randomized, double-blind, placebo-controlled trial." *Molecular Nutrition & Food Research* 56(4): 666-670; Williams, E. J., et al. (2017).

ranged from four to six fruit and vegetable capsules per day. Moreover, several of the studies state that the observations made in the evaluations warrant additional research.

DSSRC does not dispute that consumption of a diet that includes fruits and vegetables helps to reduce the risk of DNA damage and that supplementation with Juice Plus+ can help enhance the benefits. Notwithstanding, DSSRC determined that because a large segment of the intended target audience includes those consumers who are deficient in a diet of fruits and vegetables, several of the remaining social media posts could be reasonably interpreted as meaning that Juice Plus+ could serve as a replacement for eating fruits and vegetables and that the product, alone, would have a beneficial effect on the molecular profile of DNA, an interpretation that DSSRC determined was not supported by the studies provided by the Company. As such, DSSRC recommended that the Company either remove those social media posts in their entirety or modify the posts to make clear that supplementing a diet of fruits and vegetables with Juice Plus+ may be beneficial in protecting and maintaining healthy DNA.

*e. Reduced Inflammation*

The NGO has alleged that Juice Plus+ salesforce members continue to disseminate claims which imply that its product can reduce inflammation and that such claims can be considered unapproved drug claims pursuant to the Federal Food, Drug, and Cosmetic Act.

Importantly, DSSRC noted that its evaluation of product performance claims in the direct selling industry is limited to assessing whether claims are truthful, non-misleading, and substantiated (e.g., supported by a reasonable basis). DSSRC's substantiation standards greatly align with those of the FTC and the BBB National Programs' National Advertising Division (NAD) and is often deferential to FTC guidance. Like the FTC and NAD, DSSRC also does not assess compliance with the Federal Food, Drug, and Cosmetic Act (e.g., whether or not a product is misbranded, an unapproved new drug, or is promoted off-label). Instead, DSSRC focuses on whether there is a reasonable basis—or in the case of a health-benefit claim, competent and reliable scientific evidence—to support the claim. When there is an applicable federal regulation or a federal agency action that directly relates to the product or claim before DSSRC, DSSRC will attempt to harmonize its efforts with those of the appropriate regulatory agency.

In the advertising at issue in this inquiry, DSSRC determined that the messages communicated by several social media posts could be reasonably interpreted by consumers as meaning that Juice Plus+ can reduce inflammation. Juice Plus+ provided DSSRC with several studies which it contended demonstrated that Juice Plus+ reduced inflammation.

DSSRC determined that, collectively, the studies relied on by Company did support the conclusion that supplementing a diet with Juice Plus+ provides a benefit regarding reduced inflammation. More specifically, several of the Company's clinical studies have shown that dietary supplementation of a fruit berry and vegetable juice concentrate lowered the biomarkers of systemic low grade chronic inflammation and that these

biomarkers correlate with improved blood circulation and energy levels, and lower muscle soreness.

For example, in a placebo-controlled randomized clinical study, it was shown that supplementation of Juice Plus+ over a period of 8 weeks in obese but otherwise healthy subjects led to a statistically significant reduction in the levels of low-grade chronic inflammation biomarkers.<sup>38</sup>

Fruits and vegetables are a rich source of antioxidants and other biologically active substances<sup>39</sup>, and it is not disputed that a diet high in fruit and vegetables may help to reduce inflammation and, as such, DSSRC agreed that supplementing a diet with Juice Plus+ can support reduction of inflammation in an otherwise healthy population. However, as almost all of the individual studies in the case record were conducted on a specific population (i.e., obese, women premenopausal women, male athletes, etc.) and noted the need for further experimental investigation and validation, DSSRC again concluded that the evidence was not sufficient to support an implied message that taking Juice Plus+, alone, would result in reduced inflammation. In order to support such a message, it would be incumbent on the Company to provide reliable and competent scientific evidence demonstrating that a recommended serving of the product (i.e., two capsules a day) alone provided the stated (or implied) benefit of reducing inflammation. DSSRC determined that no such evidence has been provided by the Company.

Notwithstanding this conclusion, DSSRC further determined that a claim stating that a normal diet of fruits and vegetables supplemented with Juice Plus+ can result in reduced inflammation.

Several of the social media posts that remain publicly available include long slide shows and thirty-minute videos. DSSRC concluded that the excerpts in several of these presentations include appropriate messages about the necessity of “eating the rainbow,” cultivating plant-based food and provide recipes for enriching a diet with fruits and vegetables.<sup>40</sup>

Nevertheless, several of these presentations also included a stand-alone slide or statement that could be reasonably construed by consumers as communicating that Juice Plus+ alone provided reduced inflammation which DSSRC determined was not an accurate characterization of the studies provided by the Company.

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<sup>38</sup> *Supra* at 9.

<sup>39</sup> See “Super Foods for Optimal Health” at <https://www.webmd.com/food-recipes/antioxidants-your-immune-system-super-foods-optimal-health>.

<sup>40</sup> Juice Plus+ salesforce member Jennifer Boltz was responsible for several social media posts that remain publicly available. In one slide-show presentation that include 100 slides, Ms. Boltz explains the benefits of “eating the rainbow” and includes a number of slides indicating that Juice Plus+ is not intended to replace a diet of fruits and vegetables but can be used to supplement such a diet. DSSRC did not object to these slide show presentations.

Accordingly, DSSRC determined that in the absence of reliable, clinically relevant data to support the categorical, unqualified claim that Juice Plus+ can reduce inflammation (including the claim that Juice Plus+ can “help with inflammation”), the Company and its salesforce members should not disseminate product performance claims that imply that the Juice Plus+ is solely responsible for the reduction of inflammation.

*f. Improving Hair and Skin Condition*

As noted by the FTC, a common problem in the substantiation of advertising claims is that an advertiser has valid studies, but the studies do not support the claim being made. Advertisers should make sure that the research on which they rely is not just internally valid, but also relevant to their specific product and to the specific advertised benefit. Although Juice Plus+ provided double-blind, placebo-controlled studies that produced statistically significant results, DSSRC was concerned about the consumer relevancy of the data. For example, one of the studies evaluated markers of oxidation, inflammation and skin capillary microcirculation in forty-two obese pre-menopausal women. The second study consisted of 52 healthy middle-aged women and similarly assessed the microcirculation of the skin at 12 weeks of intervention.

DSSRC noted the small sample sizes of both tests as well as the gender specific testing sample – with one of the studies using unhealthy (i.e., obese) participants. DSSRC concluded that these limitations in the testing methodology were particularly relevant because the Company’s advertising is not targeted solely to women and advertisers shouldn’t rely on research based on a specific test population for claims targeting to the general population.

For these reasons, DSSRC concluded that the Juice Plus+ testing results were insufficient to support claims that the product improves skin and hair conditions for men and women.

*g. Immune System Support*

Enriched with minerals (such as selenium and zinc), and vitamins and antioxidants (such as vitamins C, A, D and E), fruits boost the immune system, lower inflammation, and enhance nutrient absorption. Studies have shown that fruits and vegetables provide nutrients—like beta-carotene, vitamin C, and vitamin E—that can boost immune function. Because many vegetables, fruits, and other plant-based foods are also rich in antioxidants, they help reduce oxidative stress.<sup>41</sup>

For example, the Company provided one study showing increased plasma levels of antioxidants and folate and of gamma delta T cells, which are believed to strengthen

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<sup>41</sup> Barnard ND, Goldman DM, Loomis JF, et al. Plant-based diets for cardiovascular safety and performance in endurance sports. *Nutrients*. 2019;11(1). pii: E130.

immune function<sup>42</sup> More specifically, Juice Plus+ contains several antioxidants including vitamin C, vitamin E, b-carotene and folate.

While DSSRC agreed with the NGO that the individual studies did not support a conclusion that taking a recommended dose of Juice Plus+ alone will boost or help the immune system, the Company's research did provide support for the general observation that taking Juice Plus+ in conjunction with a plant-enriched diet would be beneficial to immune system health.

#### *h. Lung Functioning*

In light of DSSRC's earlier determination in this decision that the remaining social posts are targeted to a general audience of consumers and that many of the posts (including those that refer to "healthy lung support") could be reasonably understood by consumers as meaning that healthy lung functioning is a benefit specifically attributable to the directed use of Juice Plus+ alone, the Company has the burden to provide reliable evidence to support such a take-away.

Here, Juice Plus+ provided one study to support its claims that Juice Plus+ has been proven to support healthy lung functioning.<sup>43</sup>

The Company's double-blind, placebo-controlled study was conducted on 75 smokers (primarily male). More specifically, eligible participants were heavy smokers who reported a smoking history of 20 or more cigarettes per day for at least 10 years. The study was divided into 3 subgroups and each group was administered either a placebo, fruit and vegetable capsules or fruit vegetable and berry capsules. While the study results indicated that the pulmonary function and biochemical parameters of the heavy smokers assigned to the fruit and vegetable and fruit vegetable and berry capsules seemed to have beneficial effects from the nutraceutical treatment and appeared to indicate that there was a partial reduction in some of the damaging effects of smoking cigarettes, DSSRC determined that the study was of limited probative value as the evaluation was confined to a group of individuals with compromised respiratory functioning (i.e., longtime, heavy smokers). Thus, the study provided no reliable data on how the product would perform on individuals with normal lung capacity – i.e., a large segment of the intended audience of the advertising.

DSSRC does acknowledge that there is a growing body of research associating the consumption of fruits and vegetables with improved lung health and dietary factors and nutrients including fruits and vegetables can provide a potential protective role in maintaining respiratory health.<sup>44</sup> Although there was insufficient data attributing such a benefit solely to Juice Plus+, DSSRC also concluded that it would be appropriate for the

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<sup>42</sup> Nantz MP, Rowe CA, Nieves C Jr, Percival SS. Immunity and antioxidant capacity in humans is enhanced by consumption of a dried, encapsulated fruit and vegetable juice concentrate. *J Nutr.* 2006 Oct;136(10):2606-10. doi: 10.1093/jn/136.10.2606. PMID: 16988134.

<sup>43</sup> *Supra* at 16.

<sup>44</sup> <https://www.medicalnewstoday.com/articles/315995>.

Company to claim that supplementing a diet of fruits and vegetables with Juice Plus+ contributes to healthy lung support.

C. *Miscellaneous Advertising*

- *Juice Plus+ TV videos*

The NGO identified a handful of long-form videos which include claims regarding the health benefits of using Juice Plus+. DSSRC determined that while a majority of the videos focus on the fruits and vegetables contributing to a healthy lifestyle, certain portions of the videos appear to overstate the findings of the Company's clinical research.

In one 30-minute video presented on Juice Plus+ TV (titled "The Power of Plants") the program host emphasizes the impact of eating fruits and vegetables while adding Juice Plus+ to the diet. Two guest doctors also appear on the program and discuss various studies that have been conducted on the product. However, DSSRC was concerned that the doctors make broad health claims that would not be supported by the results of those studies. For example, a gastrointestinal doctor references the results of a study from the University of Memphis<sup>45</sup> while discussing health benefits pertaining to weight loss and colon cancer. DSSRC determined that the doctor's comments could be interpreted as an implied claim that the study provides support that Juice Plus+ has been shown to address these conditions. Although the authors of the study did state that the results suggested that a dried fruit and vegetable supplement, with a high fiber meal replacement can alter the intestinal microbiota and improve glucose, the study was not designed to observe the effects of the product on either weight loss or colon cancer. In addition, the subjects evaluated in the study were premenopausal, overweight/obese women which is only a small segment of the target audience of Juice Plus+' marketing.

DSSRC was also concerned with the presentation of quantified results in the video based on the "combined results of 3 studies" indicating a reduction of DNA damage (i.e., 7-12% reduction over 60 days in healthy middle-aged patients; 44% reduction over 72 days in a young population and a 66% reduction over 80 days in elderly subjects). The studies provided by Juice Plus+ to support the effect of the product on DNA damage were all conducted using different protocol, including varying dosage amounts, sample sizes and statistical analysis' and, as such, DSSRC questioned the reliability of the quantified percentage reductions as presented in the context of the video.

DSSRC also determined that the Company presented no reliable basis for one doctor's statement that "we can do the same to children" when discussing the results of one study of cognitive functioning on adults.

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<sup>45</sup> Van der Merwe, M.; Moore, D.; Hill, J.L.; Keating, F.H.; Buddington, R.K.; Bloomer, R.J.; Wang, A.; Bowman, D.D. The Impact of a Dried Fruit and Vegetable Supplement and Fiber Rich Shake on Gut and Health Parameters in Female Health Care Workers: A Placebo-Controlled, Double-Blind, Randomized Clinical Trial. *Microorganisms* 2021, 9, 843.

In sum, DSSRC determined that many of Juice Plus+ TV videos that remain publicly available often conflate the message that supplementing one's customary intake of fruits and vegetables with Juice Plus+ can support a number of health benefits with the unsupported message that these benefits are attributable solely to taking the recommended serving of Juice Plus+, a message that DSSRC concluded was not consistent with the evidence in the case record.<sup>46</sup>

For the above reasons, DSSRC recommended that Juice Plus+ either remove "The Power of Plants" video in its entirety or redact those portions of the video which make reference to colon cancer, weight loss and quantified claims regarding DNA damage based upon the combined results of three studies.

- *Blog Posts*

The NGO's claim database also included three blog posts that made various references to the efficacy of Juice Plus+. Neither Juice Plus+ nor DSSRC could identify the date or the placement of two of the blog posts.

One of those posts pertained to Dr. Ken Alibek, then President of Hadron Advanced Biosystems, a corporation that contracts with the U.S. government to develop innovative technical solutions for the intelligence community. Hadron Advanced Biosystems was awarded a \$2.6 million Anthrax research contract by the U.S. Army to study and develop new medical defenses for Anthrax. During an interview with Dr. Alibek, he was asked by Fox News what people could best do to defend themselves against the threat of Anthrax. Dr. Alibek replied that the best defense at our disposal is to build a strong immune system. The blog then directs readers to review the clinical research archived on the Juice Plus+ website which the blogger maintained demonstrated that supplementation with Juice Plus+ improves major immune functions.

The second, undated blog post originated from a man name Tony Spears who detailed how Juice Plus+, combined with drug therapy, the support of loved ones, and changes to his diet and sleep habits contributed to his recovery from AIDS.

As DSSRC concluded earlier in this decision, the individual studies relied on by Juice Plus+ did not support a conclusion that taking a recommended dose of Juice Plus+ alone will boost or help the immune system, however, the Company's research did provide support for the general observation that taking Juice Plus+ in conjunction with plant-enriched diet would be beneficial to immune system health.

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<sup>46</sup> One example of this potential confusion was evident at the 17:25 segment in one JPTV video, "Health Talk: The Power of Plants" from Juice Plus+ LIVE Anaheim, featuring Dr. Juan and Minerva Caramés and hosted by Presidential Marketing Director Toni Branner, the host poses the question to the studio audience: "We want to reduce inflammation in your blood vessels and at the cellular level, everywhere, and guess what does this?" When several of the audience members respond by saying "Juice-Plus," the program emphasizes that the answer is "Plants AND Juice Plus+."



However, because URLs for these blog posts were not provided by the NGO to Juice Plus+, the Company was unable to ascertain the source for the blog posts and take remedial actions.

Accordingly, because the location of these two blog posts cannot be identified and it has not been confirmed that these blog posts remain publicly available to consumers, DSSRC could not recommend that Juice Plus+ take any specific actions to reconcile the posts at this time.

The third blog post at issue was disseminated in 2019 by a woman who refers to herself as the “Lake Shore Lady.” More specifically, the post is entitled “How Juice Plus+ Started My Family’s Health Journey 13 Years Ago”. In discussing her mother’s diagnosis of a low white blood cell count, the woman references Juice Plus+ by noting that “... [her mother’s] white blood cell count was at 15,000 when she was diagnosed. They went up as high as 35,000... and today they are back below where they started at 12,500. Obviously, this is not entirely because of Juice Plus+, but the health journey it inspired has been endlessly beneficial. And the combination of learning about whole food nutrition, getting rid of processed foods/sugar/inflammatory foods, plus her mind body work with yoga and meditation – it has all brought her to the state of health she’s in today.”

When stating that “Juice Plus+ is the next best thing to real fruits and vegetables” she also notes that “This is not meant to be a substitute for eating the real thing, but it is an easy way to ensure that you are getting the plant based whole food nutrition your body needs.” The blogger also adds that “... due to its antioxidant effects, cancer patients should not take Juice Plus+. There have been a few pilot studies that conclude it can interfere with chemotherapy.” The post also includes the statement that “Taking Juice Plus+ does not mean you can stop eating fruit and vegetables.”

DSSRC concluded that the Lake Shore Lady’s did not communicate any substantive claims regarding the efficacy of Juice Plus+ to treat health-related conditions and, conversely, determined that the post provided helpful nutritional advice while including important qualifying statements regarding the role that Juice Plus+ serves in supporting a healthy nutritional profile.

In sum, DSSRC did not agree with the NGO that the Lake Shore Lady blog was inappropriately communicating health claims for Juice Plus+.

## **V. Conclusion**

DSSRC acknowledged and appreciated the actions of Juice Plus+ for its prompt attention to this matter and for its good faith efforts to proactively remove a majority of the posts brought to its attention, actions that DSSRC determined were necessary and appropriate. While DSSRC agreed that the results of the Juice Plus+ Health Start Study were encouraging and that the company should be permitted to share the results of the data in the appropriate context, DSSRC also determined that the results of this study provided by consumers would be considered anecdotal evidence and should not be

communicated in a way that could be interpreted by consumers as meaning that the stated results are based on reliable, reproducible clinical research.

With respect to the specific product performance claims, DSSRC concluded that several of the social media posts at issue could be reasonably interpreted by consumers as communicating the message that Juice Plus+ alone (i.e., not in conjunction with a diet of fruits and vegetables) may confer a number of specific health benefits. Although DSSRC determined that, collectively, the research on Juice Plus+ provides compelling data about the potential efficacy of the Company's products to deliver valuable nutrients to the body, DSSRC had several concerns about the reliability of the studies to substantiate specific health claims implying that the stated benefits were derived exclusively from the supplementation of Juice Plus+. Conversely, DSSRC concluded that claims positioning Juice Plus+ in the context of contributing to cardiovascular wellness, healthy DNA, immune system support, the reduction of inflammation, etc. when taken with a diet of fruits and vegetables were appropriate. Notwithstanding, DSSRC also concluded that the Company's testing did not support claims that stating that taking Juice Plus+ will have a beneficial effect on the specific attributes of cognitive functioning that were referenced in the remaining social posts, including overall dental health and improvements to skin and hair.

DSSRC also recommended that the Company use particular caution when presenting health-related claims and general health information in long-form video posts and the Company should review the remaining video posts at issue to make sure that the videos do not imply that taking Juice Plus+ alone could confer all of the stated health benefits or overstate such benefits to consumers.

With respect to three blog posts, DSSRC could not recommend that Juice Plus+ take any specific actions to reconcile two blog posts because the location of those posts could not be identified, and it has not been confirmed that these blog posts remain publicly available to consumers. Lastly, DSSRC determined that the one blog post that could be identified (i.e., the "Lake Shore Lady" post) did not communicate any substantive claims regarding the efficacy of Juice Plus+ to treat health-related conditions.

## VI. Company Statement

"The Juice Plus+ Company is dedicated to operating our business in an appropriate, ethical, and compliant manner. That includes representing our products in ways that are truthful, non-misleading, and scientifically valid.

Our clinical research program is second to none. Established in 1995, it is currently overseen by Dr. Manfred Lamprecht, PhD — a globally respected researcher, lecturer, and author. Dr. Lamprecht's career has included positions with prestigious institutions across Austria, including the Medical University of Graz, where he received his PhD in Medical Science, and the University of Graz, where he received his PhD in Exercise Physiology.

Over the past three decades, 47 peer-reviewed scientific research papers on Juice Plus+ Essentials Fruit, Vegetable, Berry, and Omega Blend capsules have been published in

more than 30 different scientific journals — — the overwhelming majority finding a health benefit and all demonstrating the safety of the products. The studies were carried out at 47 universities, hospitals, and research centers around the globe and tested the effects of Juice Plus+ Essentials capsules on more than 2,600 participants.

Of the 47 scientific publications, 30 reported results from randomized, double-blinded, placebo-controlled trials — regarded as the gold standard in clinical research. Due to all the above, we are confident that Juice Plus+ Essentials capsules are the most thoroughly researched nutritional products of their kind.

The Juice Plus+ Company has devoted significant resources to actively monitor, review, and address the concerns outlined within the NGO's original submission to the DSSRC. Once we accurately identified the content origins, we took immediate action by contacting those Partners responsible for the unauthorized content and asking them to remove or amend it. When necessary, we contacted the social media platform itself where the claim was disseminated to request removal of the problematic content. This process was already in place prior to the DSSRC's inquiry to The Juice Plus+ Company on behalf of the NGO. Our resolution efforts were successful. By the time the DSSRC reached out to us, most of the noncompliant content had been removed from the relevant online platforms.

We understand that maintaining truthful and compliant content is an ongoing process for direct sales companies, especially for large companies like The Juice Plus+ Company who have thousands of active Partners promoting our products. We are committed to continually monitoring social media channels so we can identify non-compliant or misleading content as it surfaces and ensure its swift remediation. The Juice Plus+ Company is grateful for the involvement of the DSSRC in the Direct Selling environment and we continue to welcome their guidance for self-regulation.”

(Case No. 115-23, closed on 5/12/23)

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