IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA

TC HEARTLAND LLC, Plaintiff, v. SUSAN S. SCHIFFMAN, Defendant.	Civil Action No. 1:23-cv-00665 **JURY TRIAL DEMANDED**

AMENDED COMPLAINT

Plaintiff TC Heartland LLC ("Heartland") respectfully brings this Complaint against Defendant Susan S. Schiffman ("Schiffman") and alleges as follows:

NATURE OF THE CASE

1. In May 2023, the Defendant, Susan S. Schiffman, published as lead author a paper attacking the safety of sucralose, the sweetener in Splenda Brand Original sweetener, in the Journal of Toxicology and Environmental Health, Part B ("May 2023 Article"). After publishing this paper, she sought more notoriety by having North Carolina State University issue a press release attacking not just sucralose, but directly attacking the safety of Splenda Brand Original sweetener ("Splenda"), America's most popular brand of sweetener. Schiffman then built on the momentum generated by that press release by giving interviews continuing to falsely attack Splenda and sucralose.

2. Schiffman's claims, however, were utterly untrue, and she knew it.

3. For starters, she knew that she had not tested Splenda. Moreover, after running through a battery of tests, Schiffman found very little to report about sucralose.

Casting about for some way to attack sucralose (and Splenda), Schiffman tested a different chemical, sucralose-6-acetate ("S6A"), which she claimed is contained in Splenda and which she also claimed is a "metabolite" of sucralose (meaning sucralose converts to S6A in the human gut). Schiffman then claimed publicly—in her paper and her press tour—that her testing proved that S6A was unsafe for consumers for multiple different reasons, which meant (in her telling) that Splenda (and sucralose more generally) was unsafe for consumers, as well.

4. None of this was true.

5. S6A is not present in Splenda. Routine testing of the sucralose used in Splenda finds absolutely no S6A, down to the lowest detection limit possible.

6. There is no published scientific evidence that sucralose is converted into S6A inside the human digestive system.

7. Aside from Schiffman's failure to connect S6A to Splenda, Schiffman's work also failed to show that S6A itself is unsafe.

8. Worse still, the limited discovery produced to Heartland in this case so far proves that Schiffman's paper, and her press tour promoting it, was not just sloppy and poor science. It was a deliberate fraud.

9. For example, Schiffman hired two different contract laboratories to run certain tests for her paper (Schiffman did not run any tests herself). The first contract lab produced results that did not initially satisfy Schiffman, so she hired the second lab to check the first lab's results. That second contract lab ***reported to Schiffman that they found no evidence that S6A damages DNA***. Contrary to basic scientific ethics, Schiffman reported

the opposite and left those contrary results out of her paper entirely. (Incidentally, the second lab that reported these "no evidence" results to Schiffman happened to be the lab that literally invented one of the very tests Schiffman was using for her paper.)

10. Even when reporting on the results from the first contract lab, Schiffman repeatedly manipulated the testing and lied about the results in her paper. For instance, Schiffman ran a screening test called a MultiFlow assay. This test can give a researcher a clue as to whether a substance may be genotoxic (*i.e.*, may damage DNA) and warrants additional, more rigorous testing. MultiFlow assays on their own are not meant to be definitive about such outcomes. Each time Schiffman had a laboratory run the MultiFlow assay correctly, the conclusion was that sucralose does not damage DNA. Not satisfied with these results, Schiffman had one laboratory run the test on S6A, not sucralose, against standard protocols to induce test results to her liking, and at such ridiculously high concentrations that almost any substance, not just S6A, would trigger a "positive" result in the screening test. In her paper, Schiffman also made the claim that she used a published, widely accepted standard to determine that S6A was "genotoxic." That statement was false. When Schiffman wrote her article and press release and gave her TV interviews, she broadcast only the results of these invalid tests as "proof" S6A was "genotoxic" or "broke up DNA." Schiffman hid from the public the testing on sucralose that universally yielded negative results for "genotoxicity," and the properly run tests that found that even S6A was not "genotoxic." She did this in part by falsely and misleadingly describing her testing protocols in the paper itself (deceptions that have only been revealed through discovery in this case).

11. Armed with this paper in which she had fraudulently misstated and omitted numerous crucial facts, Schiffman embarked in late May 2023 on a press tour in which she relentlessly, publicly, and falsely attacked Heartland's flagship product, Splenda.

12. Schiffman attacked Splenda as "something you should not be eating," because (according to Schiffman) it contains a chemical that is "genotoxic," meaning (again, according to Schiffman) it "broke up DNA." Schiffman told the public that "the amount of sucralose-6-acetate, this compound, that is in a single packet of Splenda or in one drink is enough to exceed what's called the . . . threshold of toxicological concern," which (according to Schiffman) is "the level used in the food industry and in Europe at the European food agencies to say that this is too much genotoxic compound in the food supply." Schiffman specifically claimed that this "sucralose-6-acetate" she alleged to be present in Splenda "can induce genes which are, you know, part of DNA, and it can cause inflammation and even cancer." All of this was false.

13. Further cloaking herself in a veneer of science, Schiffman falsely claimed that her paper "establish[ed] that sucralose-6-acetate is genotoxic" and found that both sucralose and S6A "cause 'leaky gut.'" All of this, too, was false.

14. Schiffman's claims—that Splenda contain S6A, that S6A is genotoxic, and that her paper "established" various adverse health effects of sucralose and S6A—were false, and Schiffman knew it, or at the very least, recklessly disregarded the truth. These falsehoods resulted not from poor science, but from a deliberate manipulation of the scientific process to reach a desired, but false, result.

15. By falsely telling the public that Splenda contains a "genotoxic" substance that "broke up DNA" and "can cause inflammation and even cancer"—and that Splenda contains enough of this substance to "exceed . . . the threshold of toxicological concern"—Schiffman has caused substantial harm to Heartland.

16. In the food science industry, it is now too easy to get clicks and interviews by trumpeting sensationalist, but unfounded, fears about common food products. Schiffman's desire for notoriety led her to breach her ethical and scientific responsibilities and report untrue and unfounded nonsense. This unscientific and dishonest behavior has not only harmed Heartland but has also created further mistrust in consumers who rely on the scientific community to give them the truth.

17. Heartland has battled sloppy and poor science with scientific publications in the past. However, Schiffman's work is not just sloppy or poorly done. It reflects an intentional set of choices to break the rules of scientific testing and ignore contrary data for the express desire to harm Splenda. This rule breaking was hidden from readers and consumers, making an objective review and response to Schiffman's "science" impossible. It was only through the discovery and subpoena process that this significant misconduct was brought to light.

18. Splenda brand sweetener and the alternative sweetener category continue to be one of the most intensely and falsely attacked categories in food. Splenda has been and remains a safe ingredient, vital and intended to help the public reduce added sugars in their diets, manage a healthy weight, and avoid excess sugar. Heartland brings this lawsuit to

expose the truth and help consumers whose real and urgent health needs are ill-served by Schiffman's falsehoods.

PARTIES

19. TC Heartland LLC is a limited liability company organized under the laws of the State of Indiana with its principal place of business located at Carmel, Indiana. TC Heartland LLC's sole member is a limited liability company, whose sole member, in turn, is another limited liability company, and so forth, culminating in a single ultimate non-LLC member who is a resident and citizen of the State of Indiana.

20. Susan S. Schiffman is an individual residing in or around Durham, North Carolina and is a citizen of the State of North Carolina.

JURISDICTION AND VENUE

21. This Court has subject matter jurisdiction pursuant to 28 U.S.C. § 1332. The parties are citizens of different states, and the amount in controversy exceeds $75,000.

22. This Court has personal jurisdiction over Schiffman because she is domiciled in this state and/or engages in substantial activity within this state and/or the injury suffered by Heartland arises out of Schiffman's acts or omissions within this state.

23. Venue is proper in this Court under 28 U.S.C. § 1391(b)(1) because Schiffman is a resident of this district. Further, venue is proper under § 1391(b)(2) because a substantial part of the events or omissions giving rise to Heartland's claim occurred in this district.

FACTUAL ALLEGATIONS

I. Since 2015, Heartland Has Produced Splenda, America's Favorite Sweetener Brand

24. Splenda is America's favorite sweetener brand and the number one recommended sweetener brand by doctors and dietitians.

25. Splenda is often used to sweeten drinks like coffee or tea and is also a popular substitute for sugar in baking.

26. Millions of people use Splenda every day as a healthy alternative to sugar. Sweeteners like Splenda are highly effective for reducing sugar in the diet and for persons who may have conditions like diabetes.

27. Heartland has produced Splenda and Splenda brand products since 2015. Sucralose is the non-nutritive sweetener used in Splenda.

28. Splenda is a safe and effective sugar alternative. Sucralose is an approved food product which has gone through a rigorous, more than ten-year period of review upon submission as a food additive petition to the U.S. Food and Drug Administration.

29. This rigorous process proved the safety and efficacy of sucralose as well as any impurities that may appear in sucralose. Most if not all food products—including everyday ingredients like flour, sugar, and salt—can contain impurities. In 1999, the FDA approved sucralose as a general-purpose sweetener—which, under the Federal Food, Drug, & Cosmetic Act, reflects the FDA's reasoned judgment that sucralose is "not injurious" to human health.

30. Beyond this gauntlet of safety and efficacy testing for FDA approval, scientists have continued to put sucralose to the test over the past 25 years and have continually proven it to be a safe and effective sugar alternative.

31. The most common form of Splenda is single-serving yellow packets, which consumers often add to drinks such as coffee and tea.

Fig. 1.

32. In addition to Splenda packets, Heartland produces and sells Splenda brand products for baking. These products include Splenda Granulated Sweetener, Splenda Sugar Blend, and Splenda Brown Sugar Blend.

33. Heartland also produces and sells Splenda brand coffee creamers, meal replacement shakes, and water enhancers.

34. Notwithstanding the initial and continued rigorous testing of sucralose, Schiffman for the better part of the last two decades has promoted a myth that sucralose (and Splenda) is unsafe. This kind of baseless fearmongering dressed up as legitimate

science not only harms Heartland, but also the millions of people who rely on Splenda as a part of a healthy and balanced lifestyle.

II. Schiffman's Vendetta Against Splenda and Sucralose

35. Susan Schiffman is a psychologist with experience in smell and taste psychology. She is not a toxicologist, biologist, chemist, genomicist, or bioinformatician. She does not have a medical degree. She holds a psychology license from North Carolina.

36. Schiffman has conducted research into smell and taste perception, including if and how these senses change with advancing age, the taste of certain amino acids, and the impact of certain chemicals on taste perception. She has held positions at Duke University in its Psychiatry and Psychology departments. She is also currently an adjunct professor in North Carolina State University's Electrical and Computer Engineering Department.

37. In correspondence with co-authors and contract laboratories that she hired to conduct the experiments reported in the May 2023 Article, Schiffman [redacted] She introduced herself to co-author Elizabeth Scholl as having "[redacted] but [redacted] and [redacted] She repeatedly told BioReliance, a contract laboratory, [redacted] run under conditions that she dictated despite having no training in toxicology.

38. The beginning of Schiffman's false and injurious claims against the Splenda brand began in the early 2000s when Schiffman was hired by the Sugar Association to be

an expert witness to attack Splenda. The core of her work was so unfounded and unreliable that it was largely excluded from evidence by a Federal District Court judge.

39. Despite this finding by the Court, Schiffman turned this work paid for and promoted by the Sugar Association into a published article making unfounded claims against Splenda. Schiffman continued to make proposals to the Sugar Association to invent new ways to try to attack Splenda and ensure that she was being paid along the way.

40. Schiffman's vendetta is and has been against Splenda specifically, not all non-nutritive sweeteners. In the 1990s, Schiffman and other researchers were funded by Searle, the then-owner of aspartame, the sweetener in NutraSweet and Equal, to conduct research on various health effects of aspartame. Following the publication of their results, Schiffman unequivocally stated in a TV interview: "My study found aspartame to be completely safe."

41. In addition to Searle, Schiffman's research has in the past been funded by Coca-Cola, Pepsi, General Foods, and Wrigley's. It appears, however, that Schiffman did not continue to publish any research supporting the safety of aspartame (or any other non-nutritive sweetener) after beginning her work for the Sugar Association.

42. Many years too late, Schiffman's 2008 Article attacking Splenda, funded by the Sugar Association, has recently been called into question. Dr. Elisabeth Bik, a microbiologist and scientific integrity advocate known for detecting improper image duplication in scientific publications, raised concerns about the 2008 Article on PubPeer, an online platform for scientists to discuss and critique published research. Dr. Bik pointed out that several of the Article's images were "unexpectedly similar," even though they

purported to represent the results of different tests.[1] The scientific technique that generated these images is called Western blot and has been found to be a frequent source of data manipulation.[2] Dr. Bik further pointed out that several other figures in the 2008 Article omitted certain critical information that would be needed to perform any further analysis.[3]

43. Taylor & Francis, the publisher of the 2008 Article (and the May 2023 Article), has since issued an Expression of Concern, noting that "[a]fter publication of this [2008] article, questions about the scientific integrity of the article were brought to the Editor's and Publisher's attention. We contacted the authors, but have not yet received the required data or supporting materials necessary to complete the investigation. As this investigation may take some time to resolve, we advise readers to interpret the information presented in the article with due caution."[4]

44. An Expression of Concern, as used by Taylor & Francis, indicates that serious concerns have been raised about a research publication, "where the outcome of the investigation is inconclusive or where due to various complexities, the investigation will not be completed for a considerable time," for example, "due to ongoing institutional

[1] *Comments to Splenda Alters Gut Microflora and Increases Intestinal P-Glycoprotein and Cytochrome P-450 in Male Rats*, PubPeer (last visited July 24, 2025), https://pubpeer.com/publications/A7318BB8B79BE174BCCF82C0EDD5CB.
[2] Elisabeth M. Bik, Arturo Casadevall, and Ferric C. Fang, *The Prevalence of Inappropriate Image Duplication in Biomedical Research Publications*, PubMed Central National Library of Medicine (June 7, 2016), https://pmc.ncbi.nlm.nih.gov/articles/PMC4941872/.
[3] https://pubpeer.com/publications/A7318BB8B79BE174BCCF82C0EDD5CB, *supra*.
[4] *Expression of Concern: Splenda Alters Gut Microflora and Increases Intestinal P-Glycoprotein and Cytochrome P-450 in Male Rats*, Taylor & Francis Online (March 11, 2024) https://www.tandfonline.com/doi/full/10.1080/15287394.2024.2321747.

investigations or other circumstances outside of the journal's control."[5] The Expression of Concern may be followed by a Retraction or Correction after an investigation is completed.

45. Schiffman is fully aware that it is improper to omit material information from a supposed scientific article or report. Schiffman has actually denied under oath that she would do such a thing.

46. Yet Schiffman did just that in the May 2023 Article.

47. Schiffman's vendetta against sucralose extends far beyond the publication of scientifically indefensible papers. Schiffman has turned her sights toward using her dishonest "research" to influence the European Food Safety Authority's ("EFSA") regulation of sucralose. EFSA is an agency of the European Union that describes itself as "an impartial source of scientific advice to risk managers" and as "provid[ing] the scientific basis for laws and regulations to protect European consumers from food-related risks."[6]

48. Schiffman repeatedly corresponded with EFSA regarding her research and provided data and early manuscripts of the May 2023 Article to the Authority. She sought to publish the May 2023 Article to "[redacted]." In fact, numerous early drafts of the 2023 Article have the header, "For use by EFSA."

[5] *Corrections, Retractions and updates after publication Taylor & Francis Journal Article Correction and retraction Policy*, Taylor & Francis Online (last visited July 24, 2025) https://authorservices.taylorandfrancis.com/publishing-your-research/after-publication/corrections-to-published-articles/.

[6] EFSA, *About us* (last visited July 24, 2025), https://www.efsa.europa.eu/en/about/about-efsa.

III. Schiffman Publishes the May 2023 Article that She Uses as the Basis of Her Defamatory Statements

49. On May 29, 2023, Schiffman published an article titled "Toxicological and pharmacokinetic properties of sucralose-6-acetate and its parent sucralose: *in vitro* screening assays" ("May 2023 Article"), in the Journal of Toxicology and Environmental Health, Part B.

50. The May 2023 Article purported to study a chemical compound called sucralose-6-acetate, which the Article also called S6A. Sucralose-6-acetate is not the same thing as sucralose.

51. Schiffman and her co-authors on the May 2023 Article are not toxicologists, and they did not perform any of the eight experiments reported in the paper. All eight experiments were performed by contract laboratories whom Schiffman paid to do this work. According to the May 2023 Article, funding was provided by the Engineering Foundation at North Carolina State University. Documents obtained in this case reveal that Schiffman [redacted] these contract labs—many of which were paid thousands upon thousands of dollars for these [redacted].

52. After the article was published online, Schiffman embarked on a press tour, during which she made false and defamatory statements about what the May 2023 Article studied and what it actually found.

53. Schiffman's false statements on her press tour generally fall into three categories. First, she falsely claimed that Splenda contains S6A. Second, she falsely

reported that her work showed that S6A is genotoxic—*i.e.*, that it damages DNA. Third, she falsely represented the results of the May 2023 Article's preliminary screening tests to be conclusive evidence establishing that both sucralose and S6A cause negative health effects. As discussed below, the May 2023 Article did not support any of these claims.

A. False: "Splenda Contains S6A."

54. The sucralose contained in Splenda is regularly tested for impurities, including S6A. S6A is not found in the sucralose used for Splenda down to the lowest detection limit of these tests, which is 10 ppm, or 0.001%.

55. The May 2023 Article did not discuss Splenda and did not purport to have tested Splenda for the presence of S6A (or for any other purpose). Indeed, the May 2023 Article did not report on any testing of Splenda or the sucralose contained in Splenda—as Schiffman, its lead author, well knew. Instead, the sucralose that the May 2023 Article claimed to have tested was made by a completely different manufacturer.

56. Because Schiffman did not test Splenda for the May 2023 Article, she could not truthfully claim that Splenda contains S6A. However, she did exactly that.

B. False: "S6A Is Genotoxic."

57. One of Schiffman's primary claims is that S6A has been shown to be "genotoxic," or that it "breaks up DNA." Accusing something to be "genotoxic" is serious because genotoxicity refers to the ability to damage genetic information in cells, and exposure to "genotoxic" chemicals can translate into various diseases including cancer.

58. Documents from Schiffman and the contract laboratories that conducted the experiments reported in the May 2023 Article show that Schiffman purposefully concealed data showing that S6A is *not* genotoxic.

59. The first experiment reported in the May 2023 Article is called a MultiFlow assay. A MultiFlow assay is a screening tool developed by scientists at Litron Laboratories. It exposes a test substance to cells to identify for further testing substances that *might* harm DNA or interfere with how cells work. A positive result in a MultiFlow assay does not establish genotoxicity—it simply indicates that the tested substance should be tested further. In fact, the MultiFlow assay is known to be overinclusive, producing a high rate of false positives (and, concomitantly, far fewer false negatives). That minimizes the chances that researchers fail to continue researching a potentially harmful product. Yet given this deliberately (and substantially) over-inclusive approach, researchers must perform much more testing, using far more reliable testing methods, to ultimately conclude that a particular substance actually harms DNA or interferes with how cells work. In other words, a MultiFlow assay is intended to be only the first, preliminary step in testing for genotoxicity.

60. Schiffman hired BioReliance, a contract laboratory, to conduct a MultiFlow assay on S6A.

61. In the May 2023 Article, Schiffman used MultiFlow data from BioReliance that supposedly showed S6A to be genotoxic. However, BioReliance was not the only laboratory Schiffman hired to conduct the MultiFlow test.

62. Schiffman had also hired Litron Laboratories, the laboratory that originally developed the MultiFlow assay, to perform the same test. Critically, Litron reported to Schiffman that there was no indication of genotoxicity for S6A:

Results of Study

This plate passed Quality Control (see appropriate Appendices).

MultiFlow (analysis of Genotoxic Mode of Action)

		Evidence of Genotoxicity?	Genotoxic Mode of Action	Lowest Observed Effect Concentration
Machine Learning Model Predictions (for details, see Predictions from ML Models tab)	Without S9	No	N/A	N/A
	With S9	No	N/A	N/A
Global Evaluation Factor Predictions (for details, see Predictions from GEF tab)		Evidence of Genotoxicity?	Genotoxic Mode of Action	Lowest Observed Effect Concentration
	Without S9	No	N/A	N/A
	With S9	No	N/A	N/A
Final Predictions		Evidence of Genotoxicity?	Genotoxic Mode of Action	
	Without S9	**No**	**N/A**	
	With S9	**No**	**N/A**	

Predictions from Global Evaluation Factors for MultiFlow

			Fold % Cleaved PARP		Predictions for Each Concentration									
					Clastogen Responsive Biomarkers			Genotoxic Responsive Biomarker		Aneugen Responsive Biomarkers			Genotoxic Responsive Biomarker	
					H2AX (4 Hour)	H2AX (24 Hour)	p53 (4 Hour)	p53 (24 Hour)		Phospho-Histone H3 (4 Hour)	Phospho-Histone H3 (24 Hour)	Polyploidy (24 Hour)	p53 (24 Hour)	
Test Article Name	Concentration (µM)	% RNC	4 Hour	24 Hour	≥ 1.51	≥ 2.11	≥ 1.40	≥ 1.45	Clastogenic Signature?	≥ 1.71	≥ 1.52	≥ 5.86	≥ 1.45	Aneugenic Signature?
Sucralose-6-acetate, No S9	1249.6225	22.19	1.77	62.20	0.53	0.94	1.35	1.28	No	0.45	0.40	0.69	1.28	No
	883.4831075	35.53	1.44	27.05	0.56	1.22	1.28	1.21	No	0.34	0.53	0.86	1.21	No
	624.622557	45.81	1.36	8.85	0.58	1.59	1.21	1.19	No	0.56	0.55	1.04	1.19	No
	441.6081478	62.45	1.05	3.01	0.69	1.75	1.13	1.16	No	0.66	0.92	0.93	1.16	No
	312.2169605	73.98	1.28	1.72	0.78	1.57	1.06	1.10	No	0.72	0.90	0.90	1.10	No
	220.7373911	81.88	1.08	0.97	0.87	1.36	1.01	1.11	No	0.90	1.09	0.91	1.11	No
	156.0613355	81.34	0.85	0.83	0.92	1.15	1.00	1.06	No	0.95	1.16	1.16	1.06	No
	110.3353642	86.28	1.05	1.08	0.88	1.02	1.00	1.01	No	0.84	0.92	0.89	1.01	No
Sucralose-6-acetate, S9	1249.6225	30.34	1.10	33.39	0.82	0.85	1.18	1.13	No	0.61	0.51	0.89	1.13	No
	883.4831075	41.00	0.89	13.65	0.85	1.06	1.13	1.11	No	0.80	0.58	0.94	1.11	No
	624.622557	57.05	0.91	6.15	0.91	1.13	1.12	1.11	No	0.52	0.96	1.18	1.11	No
	441.6081478	65.29	0.54	2.17	0.97	1.15	1.05	1.13	No	0.65	0.72	1.21	1.13	No
	312.2169605	77.15	0.50	1.40	1.00	1.07	1.04	1.07	No	0.70	0.96	1.18	1.07	No
	220.7373911	81.17	0.67	0.92	1.00	1.09	1.01	1.08	No	0.87	0.88	1.44	1.08	No
	156.0613355	83.41	0.57	0.89	1.00	1.01	0.96	1.05	No	0.92	0.88	1.43	1.05	No
	110.3353642	83.56	0.70	1.49	1.02	0.99	1.00	1.05	No	1.00	1.08	1.35	1.05	No

Fig. 2.

63. Litron also reiterated to Schiffman in emails that it did not find genotoxicity after conducting ***two separate MultiFlow* tests**. In one email, Litron wrote: "You will recall that for sucralose-6-acetate we did not observe sufficient induction of the genotoxicity

biomarkers to indicate a positive response . . . and conducting a repeat of the first experiment [] resulted in the same conclusions."

64. Litron reported these results to Schiffman more than two years prior to publication of the May 2023 Article.

65. When the May 2023 Article was released, the scientists at Litron Laboratories expressed incredulity at Schiffman's claims about S6A, exclaiming in internal emails: "I thought we determined it was NOT genotoxic!" and "She tested with us and we confirmed (twice!) that it was negative . . . ."

66. Scientific integrity requires reporting all results, even if they conflict with the investigator's hypothesis. But Schiffman concealed Litron's results in the May 2023 Article. Instead, Schiffman cherry-picked the data she liked and reported only the BioReliance data that supported her preferred hypothesis.[7] This misconduct is stunning. It is likened to flipping coins and simply throwing out all coins that come up heads so one can publish that all flipped coins come up tails.

67. Schiffman's claims about the supposed genotoxicity of S6A are false for another independent reason. Even setting aside Litron's results, the BioReliance MultiFlow

[7] Schiffman's concealment of the Litron data is part of a pattern of Schiffman shopping around for an answer that serves her agenda. In the May 2023 Article, Schiffman published the results of tests on the "pharmacokinetic properties" of sucralose and S6A conducted by BioDuro-Sundia, another contract laboratory. When BioDuro-Sundia initially informed Schiffman that their tests revealed that sucralose had no negative pharmacokinetic properties, Schiffman responded with serious "concern[s] about the outcome of the inhibition study of sucralose" and pushed BioDuro-Sundia to conduct further testing to "get the correct response." She further upped the pressure by telling BioDura-Sundia that another "highly respected laboratory cannot confirm your results." Schiffman never disclosed the identity of this "highly respected laboratory" or published its results.

data that Schiffman did use to claim that S6A is genotoxic was manipulated to achieve that result.

68. MultiFlow assays work by exposing cells to the substance being tested and then measuring the activity of certain proteins. These proteins are associated with a number of cell functions, including but not limited to DNA damage. In a MultiFlow assay, protein activity above certain established cutoffs ("biomarker cutoffs") are used to indicate *potential* genotoxicity.

69. Steven M. Bryce, a scientist at Litron Laboratories, developed the biomarker cutoff values widely used for the MultiFlow test.

70. The May 2023 Article claimed that S6A was genotoxic because it exceeded these standard biomarker cutoffs in BioReliance's MultiFlow assay results. The Article expressly claimed to have used Bryce's values. That was false.

71. Half of the MultiFlow test results reported in the May 2023 Article used cutoff values that are found nowhere in Bryce's work. The cutoff values that Schiffman used for these tests were substantially lower than the standard values. If Schiffman had used the actual Bryce cutoff values for these particular tests, they would have indicated that S6A is *not* genotoxic.

72. The Litron Laboratories data that Schiffman chose not to publish actually used the correct Bryce cutoff values. Using these values, Litron found no indication that S6A was genotoxic in any condition evaluated.

73. Schiffman knew what the real Bryce values were. She actually used those cutoff values for the other half of the MultiFlow tests reported in the May 2023 Article.

74. But these MultiFlow results—*i.e.*, those not affected by the use of fake cutoff values—are invalid for yet another independent reason. MultiFlow assays are run for a range of concentrations of the substance being tested. However, when test concentrations exceed a certain threshold ("cytotoxicity cutoff"), the test can no longer be used as a predictor of potential genotoxicity. At a high enough concentration, the vast majority of substances, including those that the public thinks of as beneficial, can be "cytotoxic," or harmful to cells. Cytotoxicity generates the same sorts of results in a MultiFlow test as genotoxicity, so when a researcher uses a high enough concentration of a substance to result in *cytotoxicity*, positive results in a MultiFlow test can no longer be used to predict potential *genotoxicity*. That is precisely why researchers use a "cytotoxicity cutoff" when conducting MultiFlow assays. Vitamins, for example, are beneficial at their recommended concentration but can be toxic—cytotoxic—at a higher concentration. At a high enough concentration, then, even vitamins would generate positive results when tested using a MultiFlow assay. That does not mean vitamins are *genotoxic*, and no reputable scientist would claim that vitamins are genotoxic based on that test result.

75. The only MultiFlow assays that generated positive results using the correct Bryce cutoff values were run at *extremely* high concentrations of S6A, well above the cytotoxicity cutoff [redacted]. If Schiffman had used the cytotoxicity cutoff [redacted], the test results at those extremely high concentrations would have been considered invalid, and these MultiFlow assays would have indicated that S6A is *not* genotoxic. In fact, these extremely high concentrations exceeded the cytotoxicity cutoff that Schiffman herself used elsewhere in the MultiFlow

experiment. In other words, if Schiffman had been consistent within her own experiment, she *herself* should have thrown out the results generated by these extremely high S6A concentrations. But that would have led her to the conclusion that S6A is *not* genotoxic, which would not have served her purposes.

76. The May 2023 Article did not disclose that *all* of the MultiFlow tests indicating that S6A is genotoxic were conducted at concentrations above the limit recommended by the laboratory conducting the test. Schiffman also concealed that the only reason some tests at *extremely* high concentrations came back positive was because she further fudged that limit to avoid having to discard those favorable (for Schiffman) results.

77. The MultiFlow test is not the only fatally flawed experiment in the May 2023 Article. The second experiment reported in the Article, the micronucleus test, likewise does not support Schiffman's claims that S6A is genotoxic.

78. The non-GLP micronucleus test is another screening technique to identify substances that may be genotoxic.[8] In a micronucleus test, a tested chemical is dissolved in a liquid vehicle and then introduced to cells, and the cells' reaction to this solution is measured. Much like the MultiFlow assay, the micronucleus test is another screening test and does not prove that a substance is genotoxic; it merely indicates that further, more precise testing is warranted. Also like the MultiFlow assay, micronucleus test results are greatly affected by the concentration of the tested chemical used for the test.

[8] "GLP" stands for Good Laboratory Practice. Certain agencies, like the EPA, accept only data from GLP studies when considering potential regulation. Researchers can perform non-GLP studies, including when the results are not meant for regulatory submission, because they are often cheaper and require less documentation. The micronucleus assay can be performed as either a GLP or non-GLP study. Schiffman directed the contract laboratory to perform only the non-GLP micronucleus assay.

79. Schiffman also used BioReliance to conduct the micronucleus test. Documents from Schiffman and BioReliance show that Schiffman purposefully concealed that the S6A solution tested was contaminated by the presence of precipitate. Precipitate is a solid that separates out of the chemical solution when the tested material in the solution is so highly concentrated that it is no longer soluble. Precipitate is effectively undissolved chunks of solid material. Critically, when a micronucleus test is conducted on a solution that contains precipitate, these solid chunks trigger effects that *appear* as though the tested chemical is damaging cells. In reality, the solid material in and of itself causes stress and damage to the cells and often generates the same kind of cell reaction that is measured by the micronucleus test.[9] Put simply, cells don't like being hit by rocks; it doesn't matter what the rock is made of.

80. Schiffman directed BioReliance to test S6A at concentrations far above the solubility limit of S6A. At these concentrations, S6A drops out of solution and forms precipitates—*i.e.*, rocks—that are very likely to cause a positive result in any micronucleus test. These kinds of results are not just false positives—screening assays are designed to generate false positives—but actually invalidate the test result entirely.

[9] The Organization for Economic Co-Operation and Development publishes internationally accepted Guidelines for the Testing of Chemicals. One of those Guidelines is specifically about the In Vitro Mammalian Cell Micronucleus Test, *i.e.*, the experiment that Schiffman purports to have conducted here. In the Guidelines, the OECD warns against the presence of precipitate: "When determining the highest test chemical concentration, ***concentrations that have the capability of producing artifactual positive responses***, such as those producing excessive cytotoxicity (see paragraph 29), ***precipitation in the culture medium*** (see paragraph 30), or marked changes in pH or osmolality (see paragraph 9), should be avoided." *OECD Guideline for the Testing of Chemicals in Vitro Mammalian Cell Micronucleus Test*, (July 4, 2023) https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/07/test-no-487-in-vitro-mammalian-cell-micronucleus-test_g1g6fb2a/9789264264861-en.pdf.

81. In BioReliance's final report to Schiffman, BioReliance prominently flagged the presence of visible precipitate to her:

Precipitate and Osmolality Results

Treatment Condition	Treatment Time	Visible precipitate	
		At the beginning of Treatment period	At the conclusion of Treatment period
S9-activated	4 hr	≥ 600 µg/mL	≥ 700 µg/mL
Non-activated	27 hr	≥ 600 µg/mL	≥ 750 µg/mL

Fig. 3.

82. Elsewhere in the same report, BioReliance again emphasized how "visible precipitate was observed in the treatment medium at the conclusion of the treatment period."

83. The presence of precipitate rendered this micronucleus test of S6A unreliable and invalid.

84. The micronucleus test results were also invalid for a different reason. Another important component of any micronucleus test is distinguishing between the cells' reaction to the tested chemical and their baseline reaction to the liquid (called the "vehicle") that the chemical is dissolved in. If a micronucleus test result falls within the vehicle's historical control limit—*i.e.*, the range of expected values that the vehicle by itself has scored on the micronucleus test—that result should be interpreted with great caution.

85. The May 2023 Article reported only one statistically significant result from the micronucleus test, which occurred at the highest concentration tested (and included visible precipitate). In the May 2023 Article, Schiffman claimed that this result "was

outside of the historical vehicle control limit"—in other words, claiming that the genotoxic effect was the result of the tested substance, S6A, and not the liquid vehicle around it.

86. This statement was false. BioReliance's historical control limit for that vehicle at the same experimental conditions was ***higher*** than the result Schiffman reported.

87. The problems with the micronucleus test do not end there. Documents obtained for this case reveal that if BioReliance's study protocol for the micronucleus test had been followed, the micronucleus test would *not* have shown that S6A is genotoxic. To be clear, when BioReliance followed the agreed-upon experimental method, S6A was *not* shown to be genotoxic. What happened next is truly shocking: the definition of a "positive" result was expanded to include a whole new *category* of data. And even then, this new category of data did not show that S6A is genotoxic. It was only after the initial data was combined with this new category of data and considered together that Schiffman could claim to have run a positive micronucleus test.

88. In science, you cannot throw out the rules when you do not like the results. At the very least, if an experiment run as designed gives one result and only yields a different result after changing the rules, ***both results*** should be reported and the *post hoc* experimental design change disclosed. The May 2023 Article did neither. That is both incredible and unsurprising, as doing so here would have exposed Schiffman's massively manipulative efforts to find something, *anything*, she could claim showed "proof" of genotoxicity.

89. The MultiFlow and micronucleus assays are the only experiments reported in the May 2023 Article purporting to show that S6A is genotoxic. Documents produced

to Heartland in this case have now revealed that Schiffman concealed contrary data showing that S6A is not genotoxic, promoted invalid results that should have been discarded, and made outright misrepresentations in the published Article. This misconduct was impossible to discover from the Article itself and thus could not have been exposed through honest scientific debate.

C. False: The May 2023 Article "Establishes" that "S6A is Genotoxic, Causes Leaky Gut, and Triggers Genes Associated with Inflammation and Cancer in the Gut"

90. Every test result reported in the May 2023 Article came from an *in vitro* experiment.

91. *In vitro* tests are done in the lab. They provide useful information to scientists, but they cannot be used to determine what actually happens inside the body.

92. There are countless examples of compounds that may test positive for a particular effect in an *in vitro* test but nonetheless are perfectly safe for humans. For instance, aspirin is known to cause cell death in HepG2 *in vitro* cells, and ethanol has been shown to kill cells in culture at concentrations equivalent to 60-80 proof. However, aspirin and ethanol are generally safe for people when used as intended. The reason is that *in vitro* assays typically do not replicate human absorption, distribution, metabolism, and excretion (ADME) properties, and *in vitro* assays typically expose cells to concentration levels that are significantly higher than they would be in a human.

93. Not only did all of Schiffman's data for the May 2023 Article come from *in vitro* tests, but they actually resulted from screening assays, which are a particular type of *in vitro* test. Screening assays are designed for the express purpose of quickly and cheaply

identifying potential candidates from a large pool of possibilities. By design, screening tests generate a high number of false positives because their purpose is to winnow down a large pool of possibilities to a smaller, but still large, pool of candidates on which further testing will be conducted. At least one of the screening assays used by Schiffman is also considered a hypothesis-generating technique, which means that it is used for the purpose of coming up with many, many hypotheses for further investigation. Most of these hypotheses will not be true, and they can even be mutually exclusive. The bottom line is that the results of a hypothesis-generating study cannot and should not be taken as proving any particular conclusion to be true.

94. As discussed above, the MultiFlow and non-GLP micronucleus tests are both screening assays. Even if Schiffman's MultiFlow and micronucleus results were not completely invalid for all the reasons explained above, they would still be inadequate to conclude that S6A is genotoxic.

95. Schiffman also purported to test the effect of sucralose and S6A on the gut. Two of the experiments reported in the May 2023 Article concerned the gut (*i.e.*, the intestine). The problem with both is that they were *in vitro* assays done on an artificial "gut-like" platform designed to be a screening tool.

96. This platform bears little resemblance to an actual intestine. It contains only a single layer of a single type of cell, whereas an actual intestine contains additional layers and different types of cells. These different components interact and work together to create and maintain the intestinal "barrier." Although this single-layer artificial platform does have useful applications—its developer markets it, for example, to pharmaceutical

companies for early screening of potential drugs for further testing—it cannot be used to draw conclusions about what actually happens in the gut or whether a compound causes adverse health effects like "leaky gut."

97. As relevant here, the experiments that Schiffman had conducted using this platform cannot be used to show that sucralose or S6A cause "leaky gut." One of these experiments—the measurement of transepithelial electrical resistance ("TEER")—is a screening test that simply looks at the voltage across a single cell layer after exposure to the test compound. Many things might cause a fluctuation in electrical resistance. If a change in voltage is detected, that may suggest the need for further investigation using more sophisticated techniques, but it certainly does not show the test compound causes actual "leaks" in the intestine. The other experiment was a simple permeability assay that also cannot be used to make conclusive pronouncements about the causes of "leaky gut," and certainly not when conducted on an artificial "gut-like" platform designed to be a screening tool.

98. Schiffman's claims that sucralose and S6A cause "leaky gut" are also misleading for a different reason. As discussed above, the concentration of the test compound used for any screening assay is vitally important. Schiffman did not observe any notable impact in either the TEER or permeability assay below an S6A concentration of 5 mM and a sucralose concentration of 40 mM. If the question is whether S6A or sucralose is dangerous to gut health, Schiffman's results show, if anything, the opposite.

99. A person would need to consume ***tens of thousands*** of sucralose-sweetened energy drinks ***in a day*** to achieve a gut S6A concentration of 5 mM—the lowest

concentration of S6A at which Schiffman observed any notable impact in either gut experiment.

100. Similarly, a person would need to consume ***hundreds*** of sucralose-sweetened energy drinks ***in a day*** to achieve a gut sucralose concentration of 40 mM—the lowest concentration of sucralose at which Schiffman observed any notable impact in either gut experiment.

101. These consumption levels are not just unrealistically high, they are *impossibly* high. The sheer amount of caffeine—let alone water—that would need to be ingested to reach these concentrations would likely be fatal. It is thus wholly misleading for Schiffman to claim that sucralose and S6A cause "leaky gut." Even assuming that Schiffman's screening assays establish anything about the effect of sucralose and S6A on the gut, that gut would be severely compromised—to say the least—well before any "leaky" effects could occur.

102. Finally, Schiffman's claim that S6A activates genes related to oxidative stress, inflammation, and carcinogenicity is derived entirely from a screening test used for the express purpose of generating hypotheses. The "Ballgown" method underlying the RNA-seq study reported in the May 2023 Article is a hypothesis-generating test designed to generate an extremely high rate of false positives. A positive result concerning any particular gene does not establish anything other than a potential avenue for further investigation.

103. The MultiFlow assay, micronucleus assay, TEER and permeability assays, and RNA-seq study provide the only basis for Schiffman's claims to the public that S6A is

genotoxic, that S6A causes "leaky gut," and that gut cells exposed to S6A had increased activity related to inflammation and cancer. None of these screening tests even come close to supporting Schiffman's claims.

D. Other False Claims

104. Not only did Schiffman falsely claim that Splenda contains S6A, but she also falsely claimed that sucralose is converted ("metabolized") into S6A during the human digestion process at "levels up to 10%." Schiffman cites in support an article titled "Intestinal Metabolism and Bioaccumulation of Sucralose in Adipose Tissue in the Rat" ("August 2018 Article"). Schiffman is a co-author of the August 2018 Article.

105. The 10% number, however, appears nowhere in the August 2018 Article. The August 2018 Article purported to study what happens to sucralose after feeding it to rats by looking at the rats' waste products (feces and urine). Although the Article claimed to have found two "metabolites" of sucralose in these waste products, it never identified either metabolite, let alone identified either as S6A. Whether or not one of the alleged metabolites was S6A, though, the August 2018 Article never quantified the amount of ***either*** alleged metabolite present in the rats' waste, and certainly never reported the 10% number later claimed by Schiffman.

106. In short, there is no basis in the May 2023 Article that establishes S6A is genotoxic or that it triggers genes associated with inflammation and cancer in the gut. There is also no basis in either the May 2023 Article or the August 2018 Article for Schiffman to claim that any sucralose is converted into S6A in the human gut, let alone that it is converted into S6A at "levels up to 10%" (or at any levels potentially harmful to humans).

The 10% conversion rate of sucralose into S6A supposedly supported by the August 2018 Article is entirely fictitious.

IV. Schiffman Made False and Defamatory Statements About Splenda, Sucralose, and S6A on Her Press Tour

107. When Schiffman went on her press tour, she falsely asserted that (1) Splenda contains S6A—and in dangerous amounts that supposedly exceed the "threshold of toxicological concern"; (2) S6A is "genotoxic"; and (3) her May 2023 Article established or found adverse health effects of S6A.

108. Schiffman kicked off her defamatory press tour by participating in the publication of a May 31, 2023, press release, issued by North Carolina State University. Schiffman participated in the drafting, editing, approval, and publication of this press release. Schiffman also provided numerous quotes to be used in the press release, which falsely attacked Heartland's Splenda product.[10] The press release was published on the internet (as Schiffman understood and intended it would be). It was also widely covered by the local, regional, and national press (again, as Schiffman understood and intended it would be). The press release included at least the following false and defamatory assertions that (1) **Splenda contains S6A**, (2) *S6A is genotoxic*, and (3) the May 2023 Article establishes S6A's adverse health effects:

a. "A chemical formed when we digest sucralose, a widely used artificial sweetener sold as Splenda, is *'genotoxic,' meaning it breaks up DNA,*

[10] A week after publishing the original press release, NC State removed all references to "Splenda."

according to a new study. **The chemical is also found in trace amounts in the sweetener itself**."

b. "'Our new work establishes that *sucralose-6-acetate is genotoxic,'* says Susan Schiffman, corresponding author of the study and an adjunct professor in the joint department of biomedical engineering at North Carolina State University and the University of North Carolina at Chapel Hill. '**We also found that trace amounts of sucralose-6-acetate can be found in off-the-shelf sucralose**, even before it is consumed and metabolized.'"

c. "'To put this in context, the European Food Safety authority has a threshold of toxicological concern for all genotoxic substances of 0.15 micrograms per person per day,' Schiffman says. 'Our work suggests that the **trace amounts of sucralose-6-acetate in a single, daily sucralose-sweetened drink exceed that threshold**. And that's not even accounting for the amount of sucralose-6-acetate produced as metabolites after people consume sucralose.'"

d. "Other studies have found that sucralose can adversely affect gut health, so we wanted to see what might be happening there," Schiffman says. "When we exposed sucralose and sucralose-6-acetate to gut epithelial tissues – the tissue that lines your gut wall – we found that both chemicals cause 'leaky gut.' Basically, they make the wall of the gut more

permeable. The chemicals damage the 'tight junctions,' or interfaces, where cells in the gut wall connect to each other.

e. "We found that gut cells exposed to sucralose-6-acetate had increased activity in genes related to oxidative stress, inflammation and carcinogenicity," Schiffman says.

109. In the press release, Schiffman also encouraged consumers to avoid Splenda completely: "'If nothing else, I encourage people to avoid products containing sucralose. It's something you should not be eating.'"

110. In conjunction with this press release, also on May 31, 2023, WRAL News twice aired segments on Schiffman's May 2023 Article. The first segment, airing on the 4:00 p.m. news slot, was headlined "CHEMICAL FOUND IN SPLENDA FOUND TO DAMAGE DNA." It prominently featured Splenda, with the below images on air accompanied by a voiceover from the reporter that "something many of us put in our coffee every single morning could actually be damaging our DNA. We're talking about Splenda. Today, UNC and NC State share new research focused on this artificial sweetener and the effects on our bodies":

[figure on next page]

Fig. 4.

111. The 4pm segment proceeded to parrot the May 2023 Article's claims about S6A against the backdrop of Splenda products:

[figure on next page]

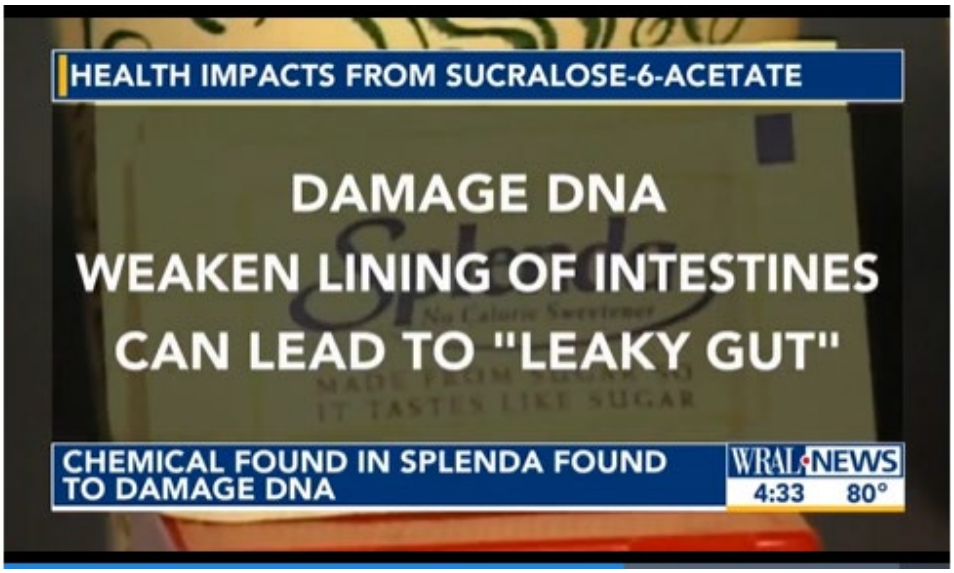
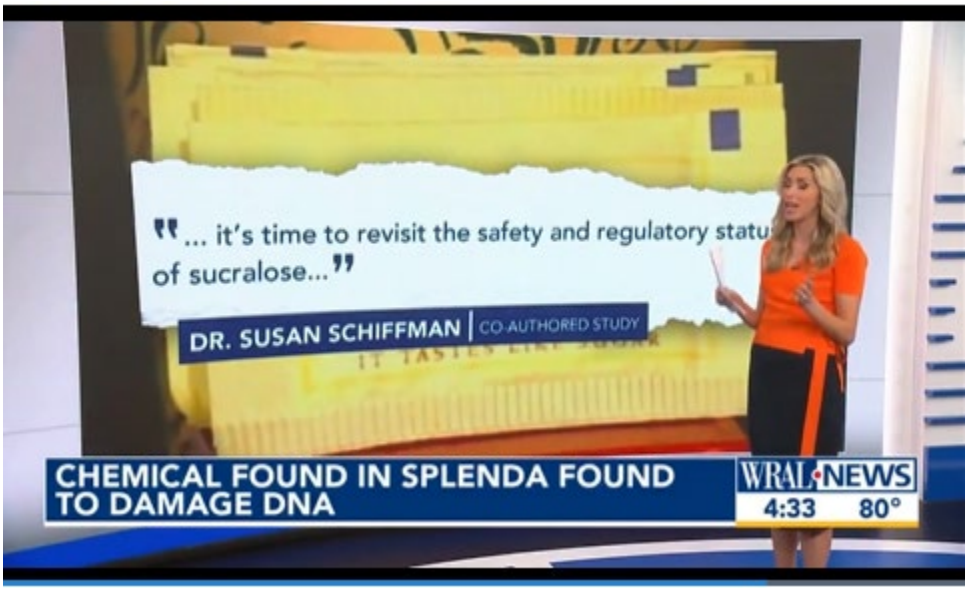


Fig. 5.

112. It then concluded by reproducing Schiffman's quotes in the press release, again against the backdrop of Splenda packets:



[figure continued on next page]

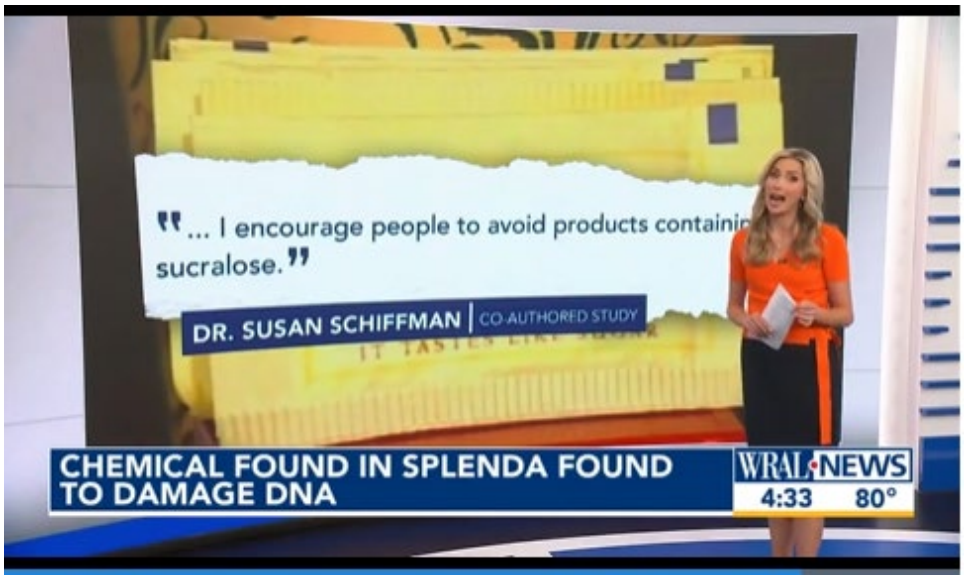


Fig. 6.

113. The second segment, airing on the 7:00 p.m. news slot, was headlined "NC STUDY DISCOVERS CHEMICAL IN COMMON SWEETENER DAMAGES DNA." Schiffman personally appeared in this segment and made numerous false and misleading statements about Splenda to WRAL News's television audience, including the following:

a. Reporter: "Welcome back. A new study discovered that a chemical found in sucralose—that's sold under the trade name Splenda, you know that brand—well, the study has found that it damages DNA. Researchers from NC State and UNC are behind these new findings. This is a big study, and so we wanted to talk to the folks behind it. The study's lead researcher, Susan Schiffman, joins us now live. . . . First question: explain what this chemical does to our DNA? That sounds like a pretty big deal."

b. Schiffman: "Yeah well it breaks it up. That's a pretty big deal. It also, if you apply it to cells, it will, you can actually see broken chromosomes in

the cells. And when it gets into the gut, it can induce genes which are, you know, part of DNA, and it can cause inflammation and even cancer."

c. Reporter: "How much Splenda or sucralose needs to be consumed in order for this to be harmful?"

d. Schiffman: "Well this is what's really interesting that we found, is that the amount of sucralose-6-acetate, this compound, that is in a single packet of Splenda or in one drink is enough to exceed what's called the tox, the, it's called the threshold of toxicological concern. It's the level used in the food industry and in Europe at the European food agencies to say that this is too much genotoxic compound in the food supply, and so, a single packet is too much, and we certainly don't want to consume this over a period of time . . . ."

e. Reporter: "Okay, one packet, that's pretty jarring because there are so many people who use Splenda as an artificial sweetener. So how do, how do other artificial sweeteners compare risk-wise?"

f. Schiffman: "Risk-wise, sucralose is worse. . . . So basically the data show it's not a good idea to consume sucralose. So if you have the yellow packets, or you have drinks in the house that have sucralose in them, I would say discard them."

Fig. 7.

114. In the interview, Schiffman did not bother qualifying that her May 2023 Article only reported on screening assays. Instead, she stated without qualification that S6A found in sucralose sold as Splenda "breaks up" DNA and "can cause inflammation and even cancer."

115. Schiffman continued making false and misleading statements about Splenda in subsequent interviews, which (as she intended) were publicized in additional media stories.

116. For example, a June 2, 2023 article titled "Researchers Discover Popular Sweetener Damages DNA" published by The Epoch Times directly quoted many of Schiffman's false statements from the NCSU press release. Schiffman also spoke with The Epoch Times directly about S6A and declared unequivocally that it is genotoxic: "This is

not acceptable. We can't have genotoxic compounds in our food supply. . . . I think if it was presented to the FDA today, they would not approve it. The original claims made to the FDA, they just aren't true. I don't know how they missed it."

117. As another example, Schiffman also spoke to Newsweek for a June 2, 2023 article titled "America's Most Popular Artificial Sweetener Damages Our DNA, Scientists Say." For that article, Schiffman falsely stated her study found that "[s]ucralose-6-acetate was genotoxic in human blood cells." She went on to claim falsely that S6A "can cause inflammatory diseases such as IBD and even cancer."

118. Many other media stories, even if they did not interview Schiffman directly, published the false statements she made in the widely disseminated NCSU press release.

V. Schiffman's Statements About Sucralose, S6A, and "Yellow Packets" Concern Splenda

119. Schiffman's statements, even those concerning sucralose, S6A, and "yellow packets" that do not directly reference Splenda, are reasonably inferred to concern Splenda. For starters, Schiffman herself, both in interviews and in the original press release, expressly referenced Splenda by name as well as Splenda's iconic, well-known "yellow packets." Moreover, as Splenda is the number one sucralose-based sweetener in the United States (and the only widely known brand of sucralose-based sweetener), the public would understand Schiffman's statements as concerning Splenda. In fact, the media and even Schiffman's own co-authors and contract laboratories understood that Schiffman's statements and research on sucralose concerned Splenda products—her clearly intended target.

120. Although the May 2023 Article does not mention Splenda by name, WRAL News's 4pm segment was headlined "CHEMICAL FOUND IN SPLENDA FOUND TO DAMAGE DNA," and the reporter emphasized that he was "talking about Splenda." The segment plastered images of Splenda products on grocery store shelves and of Splenda's yellow packets throughout the story. It even used one such image of Splenda as a backdrop against text that stated "HEALTH IMPACTS FROM SUCRALOSE-6-ACETATE" include "DAMAGE DNA," "WEAKEN LINING OF INTESTINES," and "CAN LEAD TO 'LEAKY GUT.'" It also used the Splenda image as a backdrop against Schiffman's false warning that "it's time to revisit the safety and regulatory status of sucralose" and "I encourage people to avoid products containing sucralose."

121. While WRAL News's 7pm segment ran under a different headline that did not refer to Splenda by name, both the interviewing reporter and Schiffman explicitly referenced "Splenda." Given this usage, the public would reasonably infer that the "COMMON SWEETENER" accused of damaging DNA in the headline is Splenda.

122. Even Schiffman's own co-authors and contract laboratories associate sucralose with the Splenda brand. In reference to the August 2018 Article, which nowhere mentioned Splenda by name, Nagle stated that "Susan has a new paper coming out about the ***toxicity of Splenda***. She is working with a local company (Avazyme)" (emphasis added). BioReliance [redacted] A member of the public who heard that sucralose is harmful would also associate that harm with Splenda.

123. Another independent reason that Schiffman's statements about S6A should be deemed to concern Splenda is because Schiffman has claimed that sucralose is metabolized into S6A during the human digestion process. While she has no evidence for this statement as discussed above, the claim is necessarily about Splenda because Splenda sucralose would also metabolize into S6A according to Schiffman.

VI. Schiffman Knew Her Statements Were False, or She Recklessly Disregarded the Truth

124. In her defamatory press tour, Schiffman told viewers, listeners, and readers that Splenda contained a compound, S6A, that was "genotoxic" and dangerous to their health in many ways (including causing cancer). Not only that, Schiffman said that a single serving of Splenda contained far more of the compound S6A than was deemed safe by government regulatory authorities and industry standards.

125. These allegations are false. Splenda does not contain S6A, as proven by regular testing that can detect impurities down to 0.001%. Moreover, S6A is not "genotoxic," as the actual results of Schiffman's work (before she manipulated it) proved. And her May 2023 Article reported on the results of screening assays that, even when conducted properly, do not establish or determine anything.

126. Schiffman knew that her allegations were false or, in the alternative, recklessly disregarded the truth.

127. ***First***, Schiffman knew that the study she was promoting as having shown that Splenda contains dangerous amounts of S6A did not claim to have studied Splenda, or the sucralose used in Splenda. Schiffman's own documents have now confirmed this fact.

When first asked point blank by an NCSU assistant communications director, who worked with Schiffman on the University's press release about the May 2023 Article, whether "the sucralose samples you tested that contain trace amounts of sucralose-6-acetate [was] Splenda," Schiffman obfuscated. When he followed up again reiterating that "[t]he big question for me at the moment is whether the sucralose samples you used when testing for contaminants were samples of Splenda," Schiffman begrudgingly responded: "We did our extractions from sucralose samples that suppliers were willing to give us—**not from Splenda** which has 1.1% sucralose plus fillers." (emphasis added).

128. ***Second***, Schiffman knew that the results of the MultiFlow and micronucleus screening assays did not show that S6A is genotoxic, for many reasons.

129. To begin with, as discussed above, Schiffman had in her possession test results from Litron Laboratories that indicated that S6A is *not* genotoxic. In fact, Schiffman had contacted Litron for the express purpose of seeking out a second laboratory to review BioReliance's results. In her initial outreach to Litron, Schiffman shared that BioReliance had conducted MultiFlow assays on sucralose and S6A. She then wrote: "I want to do more (and higher concentrations) of sucralose with Litron. Sucralose is water soluble." As for S6A, she asked: "Should I repeat the sucralose-6-acetate with Litron or is this ok?" Finally, she pointed out certain "[i]ssues with BioReliance data" and asked "to purchase some consulting time . . . so I know that my manuscript and understanding of the results are 100% accurate."

130. Despite retaining Litron to check BioReliance's work, when Litron's test results repeatedly came back showing that S6A was *not* genotoxic, Schiffman hid that data.

Schiffman's shocking misconduct, and her agenda against Splenda, was not surprising to Litron. Prior to running any tests requested by Schiffman, one Litron researcher commented to another: "Keep in mind that we may not want to publish anything with her . . . . The data could be great, but I wouldn't be surprised if she takes a rather polarized approach to this topic and we may not want to be a part of that no matter how amazing our data are."

131. After Schiffman published her May 2023 Article with just BioReliance's data, claiming that S6A was genotoxic, Litron's researchers expressed their shock:

- "I thought we determined it was NOT genotoxic!"
- "Yes, we did determine it was non-genotoxic. However, she's using BioReliance's data."
- "It looks like [BioReliance] gave her two results: a positive in July 2020, and then a repeat in Jan 2021 that was negative. **She tested with us and we confirmed (twice!) that it was negative, but decided to publish the positive initial data**" (emphasis added).

132. The most damning assessment of Schiffman and her agenda came from a Litron researcher who worked closely with Schiffman:

> **She clearly had a bias going into this - I had several conversations with her - and our data didn't fit with her agenda.** This work has gotten decent amount of press since it was published, so she got what she wanted. **Pretty unfortunate that she took this route though.**[11]

133. By the time the May 2023 Article was published, Schiffman had known the Litron results for two years. She decided not to publish them because they did not support her "bias" and "agenda." Schiffman's goal all along was not to conduct and publish honest

[11] Emphasis added.

and responsible scientific research but to find some way to publish a paper critical of sucralose—and thus achieve public notoriety—at all costs. The "unfortunate" decision to sit silent about Litron's data was a cost Schiffman was willing to take.

134. To be clear, even if Litron's results had come in ***after*** her publication, an honest scientist would have retracted the Article or, at minimum, publicized the fact that another laboratory could not reproduce the results published in the Article. Schiffman did neither and buried Litron's data until it was exhumed in discovery.

135. Further, Section 8.10 of the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct, which Schiffman has acknowledged under oath that she is required to follow, states that "[i]f psychologists discover significant errors in their published data, they take reasonable steps to correct such errors in a correction, retraction, erratum, or other appropriate publication means."[12] Not only did Schiffman fail to take reasonable steps to correct errors as she was required to, but she affirmatively hid Litron's data.

136. Schiffman also knew that the MultiFlow assay results that she published did not use Bryce's standard cutoffs—even though she falsely stated that she did so in the Article. In the May 2023 Article, Schiffman expressly cites "(Bryce et al. 2017)" for her

[12]*Ethical Principles of Psychologists and Code of Conduct*, American Psychological Association (last visited July 24, 2025), https://www.apa.org/ethics/code. Section 5.01 of the Code of Conduct is also relevant to Schiffman's misconduct. That section, which is titled, "Avoidance of False or Deceptive Statements," states in no uncertain terms: "Psychologists do not knowingly make public statements that are false, deceptive, or fraudulent concerning their research, practice, or other work activities or those of persons or organizations with which they are affiliated." If that were not clear enough, the section reiterates that "[p]sychologists do not make false, deceptive, or fraudulent statements concerning . . . (6) the scientific or clinical basis for, or results or degree of success of, their services; . . . or (8) their publications or research findings." *Id.* Yet, as documented throughout this Complaint, Schiffman did all of these things.

biomarker cutoff values. She does not disclose that she actually used different cutoff values for half of her assays (when the Bryce cutoffs would not support the story she wanted to tell), let alone cite any other source to support those made-up values.

137. If Schiffman had used Bryce's standard cutoff values for these assays, they would have shown that S6A is not genotoxic. Schiffman knew what the correct cutoff values were. She used them for the other half of her MultiFlow assays. Schiffman cannot have missed that she used two different sets of cutoff values, or that the correct, higher cutoff values were the only values present in the paper she specifically cited on this point, or that these correct, higher cutoff values would show that S6A is not genotoxic.

138. Schiffman likewise knew that her cytotoxicity concentration cutoffs were much higher than even [redacted]. Documents show that [redacted]. She ignored this advice and pushed forward with her higher concentrations that caused up to 80% cytotoxicity. Schiffman knew that MultiFlow tests at these concentrations show false positives due to cytotoxicity, not genotoxicity. But using these concentrations allowed Schiffman to report positive results and gave her a pretext for falsely claiming that S6A is genotoxic.

139. As for the micronucleus screening assay, Schiffman knew that the treatment medium contained visible precipitate, which renders any result unreliable and inconclusive. She nonetheless published the micronucleus test without disclosing the presence of precipitate. As discussed above, BioReliance prominently flagged the presence of precipitate for Schiffman in its final report to her. Not only that, BioReliance also [redacted]

[redacted] In one such correspondence, [redacted]

140. Schiffman knew that the presence of precipitate would call into question the integrity of the micronucleus test. Elsewhere in the May 2023 Article, she prominently noted *the lack* of precipitate in a different experiment. Specifically, Tables 7 and 8 that purport to show the results of the bacterial reverse mutation test for S6A have "None" listed for the column labeled Precipitate across the board. While emphasizing this lack of precipitate for the bacterial reverse mutation test, Schiffman omitted the presence of precipitate in the micronucleus screening assay to falsely assert that S6A is genotoxic.

Table 7. Bacterial reverse mutation test for sucralose-6-acetate.

	Without metabolic activation (μg per plate)		Without metabolic activation (μg per plate)	
Tester Strains	Precipitate	Toxicity*	Precipitate	Toxicity*
TA98	None	None	None	None
TA100	None	None	None	None
TA1535	None	None	None	None
TA1537	None	None	None	5000
WP2 *uvr*A	None	None	None	None

Precipitate and toxicity results.
*Toxicity is defined as a > 50% reduction in revertants compared to the negative controls.

Fig. 8

141. Schiffman also knew that the S6A micronucleus assay originally resulted in a negative finding of genotoxicity. When [redacted] it explained that [redacted] explained

in detail what it had done. This [redacted].

142. More generally, [redacted]

Even Schiffman's co-authors commented on the extremely high concentrations that Schiffman directed contract laboratories to test. For example, prior to publishing, Dr. Furey raised questions to Schiffman over whether "concentrations of sucralose and 6-acetate are to what you might expect to find in a person" and that the "exposure levels are not ever seen in a person."

143. Finally, Schiffman knew that she could not rely on the 2023 Article to state that S6A is genotoxic because [redacted] She chose not to disclose [redacted] Rather, she falsely wrote in the results section for the micronucleus screening assay: "Data indicate the sucralose-6-acetate is genotoxic which is consistent with the MultiFlow assay."

144. Schiffman knew that this claim was false. In the MultiFlow screening test, she purported to show that S6A was genotoxic under two different conditions tested. In the micronucleus test, notwithstanding the ratcheting up of concentration levels and blatant disregard of the presence of precipitate, Schiffman managed to allege that S6A was genotoxic under only one of the conditions.

145. In fact, Schiffman expressed [redacted] She noted [redacted] [redacted]" On [redacted] 0, she followed up, [redacted] Again, on [redacted] [redacted]

146. This barrage of emails demonstrates that [redacted] [redacted]. Yet the May 2023 Article makes no mention of it, and Schiffman further relied on the [redacted] to falsely claim that S6A is genotoxic.

147. ***Third***, Schiffman knew that the MultiFlow, non-GLP micronucleus, and TEER and permeability assays were all screening assays from which she could not draw definitive conclusions and similarly that her RNA-seq study was a tool for generating hypotheses, not deriving conclusions. She put the words "*in vitro* screening assays" in the title of the May 2023 Article, demonstrating that she knew all the experiments reported in it were *in vitro* tests and screening assays. Furthermore, BioReliance, which conducted the MultiFlow and non-GLP micronucleus assays, [redacted]

[redacted] Schiffman [redacted] and falsely told the press that her Article established that S6A is genotoxic.

148. Similarly, Schiffman made false statements in the media that gut cells exposed to S6A "had increased activity in genes related to oxidative stress, inflammation and carcinogenicity" with knowledge that the technique she used for this study was nothing but a ***hypothesis-generating test***. In fact, Dr. Furey warned Schiffman about the RNA-seq portion of an early manuscript of the May 2023 Article. He wrote in no uncertain terms:

> **I would caution against making firm conclusions with this data as the number of samples is relatively small**, but it does support a more general conclusion and does point to some potentially interesting genes. **For any RNA-seq study, you have to approach it as a hypothesis generating exercise - a specific, validated role for any implicated gene would need to be further validated in a more rigorous way.**[13]

Schiffman disregarded Dr. Furey's admonition and purported to conclude in the May 2023 Article that "RNA-seq noted that sucralose-6-acetate significantly increased expression of genes associated with inflammation, oxidative stress, and cancer."

149. Schiffman thus made the false assertions that Splenda contains S6A, that S6A is genotoxic, and that her May 2023 Article established S6A's adverse health effects with actual malice, knowing or recklessly disregarding the truth.

150. Circumstantial evidence further proves Schiffman made these false assertions with actual malice.

151. For instance, Schiffman's claims regarding the alleged presence of S6A in Splenda are inconsistent with claims Schiffman made 5 years earlier, in her August 2018

[13] Emphasis added.

Article. The August 2018 Article reported that the sucralose used in that study contained ***no impurities***. Schiffman claimed to have obtained the sucralose used in her May 2023 Article from the exact same source as for her August 2018 Article (a company called Sigma-Aldrich), yet the May 2023 Article reported that the sucralose from that exact same source contained 0.5% S6A—an assertion used in the May 2023 Article to support the broader (false) claim that ***all*** commercial food-grade sucralose (including Splenda) contains S6A.

152. Schiffman's claim that Splenda contains S6A was part of a broader preconceived and false narrative that Schiffman was actively trying to promote regarding the supposed dangers Splenda poses to human health. Schiffman, in other words, had her own preconceived notions and agenda about Splenda going into her press tour, and she was willing to bend the truth, and even make plainly false claims, to serve that agenda.

153. Even though Schiffman knew that her May 2023 Article did not report on any analysis of Splenda, she invoked the Splenda name to garner more attention in the media and from the public, thus generating more notoriety for herself and her research. As a result, and as Schiffman expected, media reports about the May 2023 Article regularly included "Splenda" in headlines and opening paragraphs, and Splenda's yellow packets featured prominently in the photos and videos accompanying these articles. Upon information and belief, Schiffman ensured that the North Carolina State University press release likewise invoked the Splenda name. As Schiffman had to know, the May 2023 Article would have received considerably less press attention without Schiffman's false

claim that Splenda contained S6A—including her claim that just one packet of Splenda contained enough S6A to surpass the "threshold of toxicological concern."

VII. Schiffman's False Statements Were Statements of Fact that Falsely Impugned the Safety of Splenda, As Well As the Integrity and Reliability of Splenda's Manufacturer, Heartland

154. Schiffman's false statements about Splenda are reasonably understood to be statements of fact, and were understood by the people who saw, heard, and read them to be statements of fact.

155. Schiffman's statements about Splenda were and are false.

156. Schiffman's statements were defamatory *per se*. They falsely impugned the safety of Splenda for human consumption, and falsely impugned the integrity and reliability of Splenda's manufacturer, Heartland, in the conduct of its business or trade.

VIII. North Carolina State University Condoned and Encouraged Schiffman's Fraudulent Article and Her Defamatory Statements

157. North Carolina State University ("NCSU") funded and institutionally supported Schiffman's research published in the May 2023 Article. It then encouraged her defamatory statements by putting out the press release as its own and encouraging media outlets to report on her paper.

158. Despite her past experience in Duke's psychology and psychiatry departments, NCSU hired Schiffman as an adjunct professor in a completely unrelated field: the Department of Electrical and Computer Engineering. Today, NCSU continues to hold Schiffman out to the public as an Adjunct Professor in Electrical and Computer

Engineering,[14] the same department in which Schiffman's spouse and co-author, H. Troy Nagle, has an appointment as a professor.

159. As an adjunct professor, Schiffman was provided an NCSU email address, which she used in her correspondence with her co-authors, research laboratories, the press, and government agencies. Schiffman also listed this email address and featured her NCSU affiliation prominently in the May 2023 Article (although she referenced the Department of Biomedical Engineering in the Article):

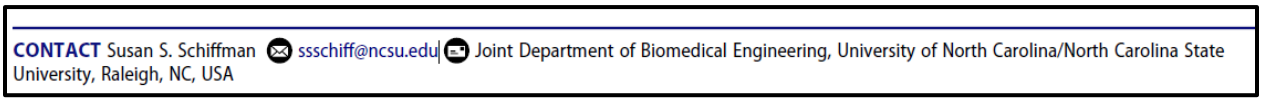


Fig. 9

160. NCSU's support of the May 2023 Article did not end there. At least one experiment for the May 2023 Article was conducted at the NCSU Genomic Sciences Laboratory. Other experiments were funded by the Engineering Foundation at NCSU. Schiffman paid co-authors with "a gift account in Biomed Eng in my husband's name (H. Troy Nagle)." Schiffman listed NCSU as the Sponsor of the experiments she ordered and signed paperwork as the Sponsor's Authorized Representative. Schiffman added her contract laboratories as vendors in NCSU's system, put NCSU's administrative staff in touch with the labs, and paid the labs tens of thousands of dollars with NCSU's funds.

161. NCSU actively publicized Schiffman's paper and supported her defamatory campaign. NCSU's assistant communications director is the one who "push[ed] the news release out tomorrow morning (Wednesday, May 31)." He told Schiffman that he

[14] *Susan Schiffman*, NCSU (last visited July 24, 2025), https://ece.ncsu.edu/people/ssschiff/.

"suspect[ed] you'll be getting queries from reporters once the release goes out, so please check your email. :)." Schiffman vowed to keep him informed of any "high impact contacts."

162. NCSU, through a newstips@ncsu.edu email address, alerted WRAL to the May 2023 Article and prompted the local news station to cover the paper and to interview Schiffman. The email listed both Schiffman and the NCSU assistant communications director as the media contacts. When WRAL emailed both the communications director and Schiffman to set up an interview with a researcher, after only 35 minutes of no response from Schiffman, he emailed Schiffman to ensure she did not miss WRAL's email. NCSU was not going to let this opportunity slip by.

163. NCSU further coordinated Schiffman's contact with numerous news agencies, including Newsweek, National Geographic, WebMD, Medical News Today, and the Epoch Times. NCSU so actively supported Schiffman's defamatory press tour that Schiffman exclaimed its assistant communications director was the "ultimate master of PR."

164. Even after NCSU learned that Schiffman did not actually study Splenda in her Article, NCSU continued to condone her press tour, telling her "it is fine to do interviews moving forward, just make sure that you reference sucralose, not Splenda, when talking about the results of this study."

165. In fact, NCSU's promotion of Schiffman's biased research against Splenda predates the May 2023 Article. The University's assistant communications director sent a copy of Schiffman's August 2018 Article to another NCSU professor to review the

methodology and findings. And shopping around the August 2018 Article to reporters for coverage, the assistant communications director wrote: "Sucralose, a widely used artificial sweetener sold under the trade name Splenda®, is metabolized in the gut, producing at least two fat-soluble compounds, according to a recent study using rats."

166. Schiffman sought out and made good use of NCSU's institutional support in publishing her fraudulent paper, and in promoting her false and defamatory press tour.

IX. Schiffman's False Statements Caused Heartland Damage

167. Predictably, and as Schiffman intended, the media latched onto Schiffman's claim that an incredibly popular consumer product causes cancer, fueled by interviews with Schiffman and a press release issued at her behest and quoting her extensively. That resulted in the following headlines:

a. "Splenda … not so splendid"

b. "Chemical found in Splenda reportedly damages DNA: 'It's something you should not be eating'" *(quote from Schiffman)*

c. "'Throw away the yellow packets,' Research finds Splenda causes DNA damage" (*quote from Schiffman*)

d. "America's Most Popular Artificial Sweetener Damages Our DNA, Scientists Say"

e. "Chemical found in Splenda damages DNA: 'Genotoxic' discovery"

f. "Sucralose, a chemical in Splenda, is found to cause 'significant health effects' in new study"

168. These headlines constitute only a small sample of the media coverage instigated by Schiffman.

169. As a result of Schiffman's false statements, Heartland and Splenda have suffered pecuniary damages, actual harm damages including damages arising from reputational harm, and presumed damages.

170. After Schiffman embarked on her press tour, Heartland was inundated with calls and emails from consumers concerned about the safety of Splenda, often directly echoing her false and defamatory statements about Splenda:

a. "Hello concerned saw on the news last night that Splenda caused cancer, dementia, and other things. Please tell me they are lying I use only splenda for everything since I had stomach surgery. It was on our local WRAL news. I'm scared to use it now Please help."

b. "I saw on television that Splenda causes cancer. Is that true?"

c. "I saw something on the TV the other day that says Splenda changes your DNA. What do you have to say about that statement?"

d. "Splenda is sucralose. A new study reveals that sucralose is genotoxic, meaning it damages cellular DNA. Of course more studies will follow, but I think it obvious you need immediately stop the sale and production of Splenda / sucralose. Your mass tort liability will be billions if you continue."

e. "I saw on the news that Splenda causes cancer."

f. “Splenda what do you have to say about this article? I heard you’re giving folks cancer.”

g. “I read a chemical found in Splenda causes DNA damage and cancer. Is that true?”

h. “Is Splenda safe to use? I was worried because of the news articles and stopped using it.”

i. “I pulled up on my phone that Splenda can mess with your DNA and causes cancer.”

j. “Your product is poison, it breaks down DNA in humans. I’m done with Splenda, sharing the news of your poison throughout the United States”

k. “I am truly angry at hearing the horrible news about the DNA damage your product is causing. I have consumed more than most of this product for years. I am very disappointed”

171. Since Schiffman started her press tour, some of Heartland’s largest customers have also expressed concern about the safety of Splenda and the misleading media coverage of the May 2023 Article.

172. To clear up the misconceptions and outright falsehoods circulating about Splenda as a result of Schiffman’s false statements, Heartland had to release a statement and even create a separate website specifically to address these issues.

173. The damage, however, was done. Heartland has continued to receive angry and distrustful messages from consumers convinced that Splenda is unsafe, accusing Heartland of poisoning the public, and, in some cases, demanding refunds:

a. “Your new statements debunking sucralose as a DNA destroyer are not entirely true. Kinda shitty that as a co you’re doing damage control on a toxic substance you are feeding to people. I would like to ask why you feel the need to defend using an insecticide as a sweetener? Also the statement about it being the safest alternative for diabete is bs.”

b. “Real bold move playing the fake news card to cover up that your product is causing cancer. Can’t wait for Splenda to settle the eventual class action lawsuit out of court so I can get my $7.”

c. “I have 3 ½ cases of Splenda protein drink. In light of news about cancer causing agent in drink I would like a refund. I do not want to give this to my husband. Where can I get my money back. I have no receipt anymore.”

d. “That’s such BS. Why do you lie to the consumer. Sucralose is poison, it causes so many problems. Migraines is number one. The U.S. is the only country that allows this to be put in foods. You should be ashamed of yourselves. This is as bad if not worse than the OxyContin lies.”

e. “You are poisoning Americans and people of other countries with your fake chemical sweetener. Shame on you for putting profits over people.”

f. “I’m very concerned about the article that came out about Splenda not being safe. I have used it for a long time. Can I get a refund?”

g. "About a month or so ago I bought a 1000 ct of Splenda. I no longer want to use it since the information was published about sucralose. How do I get my money back for the unused product?"

174. What this feedback shows is the harm Schiffman has caused—and not just to Heartland. Schiffman has also harmed the many consumers of Splenda, who are upset, and frankly scared, about what her lies mean for their personal health and the health of their loved ones.

175. Sales of Splenda brand sweetener products have dropped significantly since Schiffman set out on her press tour. In the 8-week period following the start of Schiffman's press tour, sales of Splenda brand sweetener products in the United States were down well over $1 million, largely attributable to the frenzy stirred up by Schiffman's false statements.

176. As a result of these false and misleading claims, Heartland has suffered substantial pecuniary damages in excess of $75,000, including lost sales and the cost of fighting back against the lies (which includes costs associated with creating the separate website and more). Heartland will continue to suffer these and similar damages as a result of Schiffman's false statements.

177. Schiffman's false statements have also resulted in reputational damages to Heartland and the Splenda brand. Due to these false and misleading claims, Splenda, as well as its manufacturer, Heartland, is now associated with bogus but serious safety concerns in the eyes of the public.

178. Heartland is also entitled to punitive damages because Schiffman published her defamatory statements fraudulently, with malice including personal ill will toward Heartland, and with conscious and intentional disregard of and indifference to the rights and safety of others, including Heartland and its Splenda customers, even though Schiffman knew or should have known that her statements were reasonably likely to result in injury to Heartland and its Splenda customers. Schiffman knew or recklessly disregarded that her statements were false and misleading when she made them.

COUNT I

SLANDER

179. Heartland restates and incorporates by reference its allegations as set forth in the preceding paragraphs.

180. Schiffman made false oral statements about Splenda, including the statements quoted in paragraphs 108-109, 112-113, and 116-117 above. These statements directly impugn Heartland as the producer of Splenda.

181. These false oral statements were made to reporters and the public.

182. These false oral statements are slanderous *per se*. Statements claiming that (1) the producer of Splenda makes and sells a toxic product, (2) that an ingredient contained in Splenda is "genotoxic," and (3) that she has conclusively established the adverse health effects of consuming Splenda tend to impeach Heartland in its trade as a producer of non-nutritive sweetener products for the public. These statements also tend to subject Heartland to ridicule, contempt, or disgrace as an unethical purveyor of poisonous products.

183. Even if Schiffman's false oral statements were not slanderous *per se*, they are slanderous *per quod*, as they are certainly defamatory when considered in connection with innuendo, other statements, and the surrounding circumstances of Schiffman's press tour and the resultant reporting on the May 2023 Article.

184. Schiffman made these statements knowing they were false, or at least recklessly disregarding their truth or falsity, as evidenced by, among other things, the fact that Schiffman knew the May 2023 Article reported having studied sucralose from a different manufacturer, not Splenda or the sucralose used in Splenda; that Schiffman knew that her May 2023 Article reported only on *in vitro* and screening assays; that Schiffman hid data showing that S6A is not genotoxic and selectively published other data supporting her preferred hypothesis that S6A is genotoxic; and that Schiffman directed the contract labs to perform testing on sucralose and S6A at outrageously high and unscientific concentrations and using nonstandard, completely unreliable methodology.

185. These false oral statements caused injury to Heartland in the form of pecuniary damages, actual harm damages including reputational damages, and presumed damages.

186. To the extent that this count is subject to N.C. Gen. Stat. § 99-1, and without admitting that § 99-1 applies, Heartland confirms that it served notice to Schiffman of her false and defamatory statements more than five days before filing this lawsuit.

COUNT II

LIBEL

187. Heartland restates and incorporates by reference its allegations as set forth in the preceding paragraphs.

188. Schiffman made false written statements about Splenda, including the statements quoted in paragraphs 108-109, 112-113, and 116-117 above. These statements directly impugn Heartland as the producer of Splenda.

189. These false written statements were made to reporters and the public.

190. These false written statements are libelous *per se*. Statements claiming that (1) the producer of Splenda makes and sells a toxic product, (2) that an ingredient contained in Splenda is "genotoxic," and (3) that she has conclusively established the adverse health effects of consuming Splenda tend to impeach Heartland in its trade as a producer of artificial sweetener products for the public. These statements also tend to subject Heartland to ridicule, contempt, or disgrace as an unethical purveyor of poisonous products.

191. Even if Schiffman's false written statements were not libelous *per se* because they are not obviously defamatory, they are defamatory under North Carolina's "middle-tier" standard for libel because they are susceptible to a reasonable interpretation that is defamatory.

192. Even if Schiffman's false written statements were not libelous *per se* or defamatory under North Carolina's "middle-tier" standard for libel, they are libelous *per quod*, as they are certainly defamatory when considered in connection with innuendo, other

statements, and the surrounding circumstances of Schiffman's press tour and the reporting on the May 2023 Article.

193. Schiffman made these statements knowing they were false, or at least recklessly disregarding their truth or falsity, as evidenced by, among other things, the fact that Schiffman knew the May 2023 Article reported having studied sucralose from a different manufacturer, not Splenda or the sucralose used in Splenda; that Schiffman knew that her May 2023 Article reported only on *in vitro* and screening assays; that Schiffman hid data showing that S6A is not genotoxic and selectively published other data supporting her preferred hypothesis that S6A is genotoxic; and that Schiffman directed the contract labs to perform testing on sucralose and S6A at outrageously high and unscientific concentrations and using nonstandard, completely unreliable methodology.

194. These false written statements caused injury to Heartland in the form of pecuniary damages, actual harm damages including reputational damages, and presumed damages.

195. To the extent that this count is subject to N.C. Gen. Stat. § 99-1, and without admitting that § 99-1 applies, Heartland confirms that it served notice to Schiffman of her false and defamatory statements more than five days before filing this lawsuit.

COUNT III

TRADE LIBEL / PRODUCT DISPARAGEMENT / INJURIOUS FALSEHOOD

196. Heartland restates and incorporates by reference its allegations as set forth in the preceding paragraphs.

197. Schiffman made false statements about the safety of Splenda, including the statements quoted in paragraphs 108-109, 112-113, and 116-117 above. These statements directly impugn the quality of Splenda branded products.

198. These false and disparaging statements were made to reporters and the public.

199. These false and disparaging statements caused injury to Heartland in the form of pecuniary damages and actual harm damages including reputational damages.

200. To the extent that this count is subject to N.C. Gen. Stat. § 99-1, and without admitting that § 99-1 applies, Heartland confirms that it served notice to Schiffman of her false and defamatory statements more than five days before filing this lawsuit.

COUNT IV

VIOLATIONS OF THE NORTH CAROLINA UNFAIR AND DECEPTIVE TRADE PRACTICES ACT

201. Heartland restates and incorporates by reference its allegations as set forth in the preceding paragraphs.

202. Schiffman engaged in unfair or deceptive acts or practices in violation of N.C. Gen. Stat. § 75-1.1 by making false or misleading statements in North Carolina about the safety of Splenda and sucralose, including the statements quoted and described in paragraphs 108-109, 112-113, and 116-117 above.

203. Schiffman's unfair or deceptive acts or practices were made in commerce and affected commerce, as she expressly (and successfully) discouraged consumers from consuming Splenda branded products.

204. These unfair or deceptive acts or practices caused injury to Heartland in the form of pecuniary damages and actual harm damages including reputational damages.

PRAYER FOR RELIEF

WHEREFORE, Heartland respectfully prays for the following relief:

a. Entry of judgment in favor of Heartland and against Schiffman;

b. An injunction requiring Schiffman to cease and desist from making false and misleading statements about Splenda and Heartland.

c. An award of pecuniary damages.

d. An award of actual harm damages.

e. An award of presumed damages.

f. An award of punitive damages pursuant to N.C. Gen. Stat. § 1D-15.

g. An award of treble damages pursuant to N.C. Gen. Stat. § 75-16.

h. An award of attorneys' fees pursuant to N.C. Gen. Stat. § 75-16.1.

i. An award of expenses and costs incurred by Heartland in connection with this action;

j. An award of pre-judgment and post-judgment interest; and

k. An award of any other relief to which Heartland is entitled.

JURY DEMAND

Heartland demands a jury trial on all issues so triable in this Complaint.

Dated: July 24, 2025

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