

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION
CIVIL ACTION NO. 3:22-CV-00034-KDB-WCM**

**GLOBAL PLASMA SOLUTIONS,
INC. ,**

Plaintiff,

v.

**ELSEVIER LTD AND
ELSEVIER INC.,**

Defendants.

MEMORANDUM AND ORDER

In this action, now spanning over four and a half years and nearly 400 docket entries, Plaintiff Global Plasma Solutions, Inc. (“GPS”) contends that its air purifier business was greatly harmed by a defamatory article published in *Building and Environment* (“BAE”), a scientific journal owned by Defendant Elsevier LTD (together with co-Defendant Elsevier Inc., “Elsevier”). Specifically, GPS alleges that several critiques of its “bipolar ionization” technology were false and Elsevier’s advertisement of BAE’s articles as “peer reviewed” violated the Lanham Act. Now before the Court are the Parties’ cross-motions for Summary Judgment (Doc. Nos. 323, 324). The Court has carefully considered these motions, the Parties’ briefs and voluminous exhibits and lengthy oral argument on the motions from the Parties’ counsel on October 14, 2026.

The law provides strong protection for scientific inquiry and debate on matters of public concern. This includes the allegedly defamatory article, which was published in March 2021 at the height of the COVID-19 pandemic when air purification technologies were under intense scrutiny. Because the Court finds that GPS was a limited purpose public figure with respect to the safety and efficacy of its bipolar ionization technology and cannot establish by clear and convincing

evidence that Elsevier published the article with “actual malice,” Elsevier is entitled to summary judgment on GPS’s defamation claim. Similarly, a reasonable jury could not find that Elsevier is liable for false advertising under the Lanham Act, where there is insufficient evidence that a substantial portion of the intended audience would be misled by the truthful statements that the article was “peer reviewed” or that an Elsevier advertisement was a proximate cause of GPS’s claimed diminution in its corporate value.

Therefore, Elsevier’s Motion for Summary Judgment on GPS’s defamation and Lanham Act claims will be **GRANTED**. GPS’s Motion for Summary Judgment on various Elsevier affirmative defenses will be **DENIED** as moot, as will the other motions still pending. Finally, the Court will direct the Parties to file unredacted copies of any memorandum or exhibit filed under seal in connection with the Parties’ summary judgment motions in accordance with the process described below.

I. LEGAL STANDARD

Summary judgment is appropriate “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” *United States v. 8.929 Acres of Land in Arlington Cnty., Virginia*, 36 F.4th 240, 252 (4th Cir. 2022) (quoting Fed. R. Civ. P. 56(a)); see *United States, f/u/b Modern Mosaic, LTD v. Turner Construction Co., et al.*, 946 F.3d 201, 206 (4th Cir. 2019). A factual dispute is considered genuine “if the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986); *8.929 Acres of Land*, 36 F.4th at 252. “A fact is material if it might affect the outcome of the suit under the governing law.” *Id.* (quoting *Libertarian Party of Va. v. Judd*, 718 F.3d 308, 313 (4th Cir. 2013)).

The party seeking summary judgment bears the initial burden of demonstrating the absence of a genuine issue of material fact through citations to the pleadings, depositions, answers to interrogatories, admissions, or affidavits in the record. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986) (when the nonmoving party “has failed to make a sufficient showing on an essential element of [his] claim with respect to which [he] has the burden of proof,” summary judgment is warranted); *United States ex rel. Gugenheim v. Meridian Senior Living, LLC*, 36 F.4th 173, 178 (4th Cir. 2022). If the movant satisfies his initial burden to demonstrate “an absence of evidence to support the nonmoving party’s case,” the burden shifts to the nonmovant to “present specific facts showing that there is a genuine issue for trial.” *8.929 Acres of Land*, 36 F.4th at 252 (quoting *Humphreys & Partners Architects, L.P. v. Lessard Design, Inc.*, 790 F.3d 532, 540 (4th Cir. 2015)). “The mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment.” *Hixson v. Moran*, 1 F.4th 297, 302 (4th Cir. 2021) (quoting *Anderson*, 477 U.S. at 247-48) (emphasis in *Anderson*). Rather, the nonmoving party must establish that a material fact is genuinely disputed by, inter alia, “citing to particular parts of the materials of record” and cannot rely only on “conclusory allegations, mere speculation, the building of one inference upon another, or the mere existence of a scintilla of evidence.” Fed. R. Civ. P. 56(c)(1)(A); *8.929 Acres of Land*, 36 F.4th at 252 (quoting *Dash v. Mayweather*, 731 F.3d 303, 311 (4th Cir. 2013)).

Still, summary judgment is not intended to be a substitute for a trial of the facts. *See Anderson*, 477 U.S. at 249. In determining if summary judgment is appropriate, “courts must view the evidence in the light most favorable to the nonmoving party and refrain from weigh[ing] the evidence or mak[ing] credibility determinations.” *Variety Stores, Inc. v. Wal-Mart Stores, Inc.*, 888 F.3d 651, 659 (4th Cir. 2018) (citation modified). “When cross-motions for summary

judgment are submitted to a district court, each motion must be considered individually, and the facts relevant to each must be viewed in the light most favorable to the non-movant.” *Mellen v. Bunting*, 327 F.3d 355, 363 (4th Cir. 2003).

“Summary judgment cannot be granted merely because the court believes that the movant will prevail if the action is tried on the merits.” *Jacobs v. N.C. Admin. Office of the Courts*, 780 F.3d 562, 568–69 (4th Cir. 2015) (quoting 10A Charles Alan Wright & Arthur R. Miller et al., *Federal Practice & Procedure* § 2728 (3d ed. 1998)). In the end, the relevant inquiry on summary judgment is “whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law.” *Anderson*, 477 U.S. at 251–52.

II. FACTS AND PROCEDURAL HISTORY

A. The Parties

GPS is a “closely held company” (90% owned by private equity firm Falfurrias Capital) that sells air purification devices using Needlepoint Bipolar Ionization (“NPBI”) technology. Doc. Nos. 325-5, 330-5 at 11. GPS alleges that ionization is a well-established process, and GPS’s NPBI was an advancement of ionization technology without the production of ozone or harmful byproducts. Doc. No. 325-5. More specifically, GPS claims that NPBI technology generates negative and positive ions which reduce airborne viruses and bacteria, remove particles from the air via agglomeration, and help to remove odors via particle removal. Doc. Nos. 325-3 at 42:18–43:22; 325-4, Ex. A at 9. GPS’s products have been installed worldwide, including in hospitals, offices, universities, government buildings, and schools. Doc. No. 325-5. GPS typically does not sell its products directly to these consumers; rather, it sells its products to distributors who in turn sell GPS’s products to the end-user customers. *Id.*

Elsevier is a leading publisher of scholarly journals, publishing nearly 3,000 journals. Doc. Nos. 337-4 at 36-37; 337-5 at 57-58. Elsevier Ltd. publishes BAE. Doc. No. 337-6.

B. The Public Interest and Scientific Debate over Air Cleaning Technologies

“Obviously, the issue of clean air is one of major public importance.” *S. All. for Clean Energy v. Duke Energy Carolinas, LLC*, No. CIV. 1:08CV318, 2009 WL 1940048, at *5 (W.D.N.C. July 2, 2009). There has long been public interest and scientific debate over the safety and effectiveness of the various technologies that claim to improve the quality of the air indoors, including ionization technology. *See, e.g.*, U.S. Environmental Protection Agency, *Ozone Generators that are Sold as Air Cleaners* (1994), <https://www.epa.gov/indoor-air-quality-iaq/ozone-generators-are-sold-air-cleaners> (noting that debate over ozone generators sold as air cleaners goes back “for almost a century”); Doc. Nos. 330-32, 330-33, 330-34, 330-38, 330-39, 330-40. GPS participated in this debate, in support of its bipolar ionization air cleaners. *See* Doc. No. 370-29 (GPS May 2020 “white paper” discussing and responding to American Society of Heating, Refrigerating, and Air-Conditioning Engineers (“ASHRAE”) journal articles “related to the treatment of indoor air” dating back to 2009).

In 2018, researchers at the New York State Department of Health (“NYDOH”) published an article in the ASHRAE Journal that explained air cleaners labeled as “bipolar ionizing” can generate reactive oxygen species (“ROS”) that react with volatile organic compounds (“VOCs”) to create harmful byproducts such as ozone, formaldehyde, and acetone. Doc. No. 330-38. ASHRAE is “an influential body within the air cleaning field,” Doc. No. 370-28 at 89-90, that issues guidance and standards for the air cleaning industry, holds instructional webinars and conferences, and provides testimony to Congress. *Id.* at 89. In response to the 2018 ASHRAE article, GPS emailed the article’s lead author attaching a GPS-authored paper, attempting to

persuade him that “GPS’s technology is very different than all other technologies.” Doc. No. 372-2 at -255. Charles Waddell, GPS’s founder and inventor of its technology, then published a public response on behalf of GPS in the ASHRAE Journal. Doc. No. 337-33. The NYDOH researchers published a reply, disputing “Mr. Waddell’s assert[ion] that NPBI should not be associated with ionization products” and explaining that “GPS manufactures ion generation devices, which must form ROS to perform ‘air purification’: ROS react with volatile organic chemicals, forming ultra-fine particles and aldehydes, as was shown in our study.” Doc. No. 330-37.

Similarly, in the immediate wake of the COVID-19 pandemic, ASHRAE (in a FAQ) did not recommend “bipolar ionizing (BPI) air cleaner” technology “because of the lack of scientific data to show whether these devices work effectively without introducing other issues.” Pl. Ex. 23. Again, GPS responded, even though it was not mentioned in the ASHRAE FAQ. It published a “white paper” entitled “GPS Response to the ASHRAE Epidemic Task Force Position Papers Regarding Needlepoint Bipolar Ionization” presenting its view of the virtues of NPBI technology and related research. Doc. No. 370-29.

By July 2020, the pandemic had taken the discussions about air-cleaning technology to “a whole new level,” according to GPS’s then-CEO. Doc. No. 337-23 at -478. GPS commissioned more than 20 tests to position its devices as effective against COVID-19 and other pathogens. Doc. Nos. 337-23 at 43, 67–68; 325-11. GPS then touted these tests and its technology in public statements. Doc. No. 325-10 at -697 (June 2020 press release claiming GPS’s technology can “inactivate SARS-CoV-2” while “producing neither ozone nor other harmful by-products”); Doc. No. 337-25 at -201 (May 2020 press release advertising GPS’s technology as a “safe” pandemic reopening strategy). Scrutiny of GPS’s devices followed. A November 2020 article used GPS’s published test data to challenge GPS’s findings and asserted that GPS’s technology may produce

byproducts, including ozone and formaldehyde, and a January 2021 article found indications that NPBI technology was ineffective on surfaces and did not measurably reduce VOCs. *See* Doc. Nos. 330-56 (“Beware the Covid-19 Snake Oil Salesmen Are Here”); 330-57. The debate about the safety and efficacy of GPS’s technology continued into 2021. Doc. No. 372-28 at 116, 123–24 (Mr. Waddell agreed that, in “early 2021[,] there was still ongoing debate between ASHRAE, GPS, and members of the public about GPS’s technology.”).

C. The BAE Article

In March 2021, BAE, whose audience is civil engineers, environmentalists, planners, architects and designers, published an article titled “Evaluating a commercially available in duct bipolar ionization device for pollutant removal and potential byproduct formation” (the “Article”). The Article studied a GPS device to “evaluate the gas and particle removal effectiveness and potential for byproduct formation as an example of “the operation of a commercially available in-duct bipolar ionization device.” Doc. No. 325-1. It begins by describing the “unprecedented level of interest and investment in indoor air cleaning technologies,” which are often “not evaluated by any federal agency or industry standards organizations for their efficacy or their potential for unintended consequences, including the generation of chemical byproducts.” *Id.* at 2. The Article then summarized the debate about bipolar ionizer devices, first noting that, on one side, bipolar ionization “is commonly reported to . . . reduce airborne particulate matter by causing them to cluster or agglomerate and form larger particles that can settle out of the air more rapidly” and “break down . . . VOCs.” *Id.* at 3. Then, on the other side, citing ASHRAE literature on ionizers “as ranging from ‘ineffective’ to ‘very effective’” and CDC statements treating ionization as “emerging” “in the absence of an established body of peer-reviewed evidence showing proven efficacy and safety under as-used conditions.” *Id.* The authors concluded: “We are not aware of

investigations of the effectiveness or potential for byproduct formation of bipolar ionization devices used in realistic settings, which presents a knowledge gap that this work intends to fill.”

Id.

The Article reported and analyzed data collected in two experiments. In the chamber test, led by Dr. Brent Stephens, an Illinois Institute of Technology professor, researchers conducted lab experiments in a controlled, furnished chamber to measure particles, ozone, NO₂, VOCs, and aldehydes. In the field test, led by Portland State University professor Dr. Elliott Gall, researchers conducted air sampling upstream and downstream of an operating ionizer installed in an occupied office building’s air handling unit, measuring particulates, ozone, and VOCs to assess the ionizer’s performance in a live setting. *Id.* at 3-12. The Article ultimately reported that the data collected in the two tests, “suggest that while ionization led to a decrease in some hydrocarbons, the ionization process appears to have led to partial decomposition of some hydrocarbons, resulting in the observed increases in some oxygenated VOCs,” *Id.* at 9. The “Abstract” of the Article similarly concluded, “both the chamber and field tests suggested that the use of the tested bipolar ionization unit led to a decrease in some hydrocarbons (e.g., xylenes) . . . but an increase in others, most prominently oxygenated VOCs (e.g., acetone, ethanol) and toluene.” Ex. 1 at 1. In closing, the Article stated that, “[t]his work is not without limitations and future directions for improvement” and that “additional work should strive to expand and ultimately standardize[] test methods for evaluating the efficacy and potential for byproduct formation of these devices.” *Id.* at 13.

D. The Article’s Publication Process

Elsevier journals, including BAE, use peer review as part of the publication process. Doc. No. 330-13 at 73. Peer reviewers have no ongoing relationship with Elsevier and generally receive no payment; rather, the journal editors issue one-off invitations to potential peer reviewers to

review articles based on the reviewers' areas of expertise. Doc. No. 337-8 at 33, 45, 50; Ex. 12 at 81. BAE's editor-in-chief Dr. Qingyan Chen created an internal BAE "Guide for Editors" that sets out a "workflow" for the peer review process. Doc. Nos. 337-10; 337-9 at 221.

After screening the submitted paper, the editor selects and invites reviewers to participate in the peer review process. Doc. No. 337-10. The guide notes that invited reviewers will often decline the invitation to review. Therefore, an editor may make a decision on whether to accept the paper for publication based on a single review report "if the review is comprehensive and thorough," although "the use of [a] single reviewer should be rare" and "two review reports may not be sufficient" if one of the reviewers does not "deliver a quality report." *Id.* at 4. While the guide lists what will "normally" be the decision based on how two reviewers might split among "accept," "minor revision," "major revision," and "reject" recommendations, the publication decision is ultimately left to the editor, who is instructed to "look at review quality and credentials to make your own judgment." *Id.* at 5. Elsevier testified that it is the individual "editor's choice as to which articles they accept" consistent with "editorial independence," because editors, not Elsevier or its employees, are the subject matter "expert[s]" best positioned to judge scholarly works in their respective fields. Doc. Nos. 330-19 at 12-13, 53, 221-22; 337-8 at 153-54.

On December 17, 2020, co-author Brent Stephens submitted the Article to BAE. The next day, Elsevier assigned the Article to editor Dr. Bert Blocken ("Blocken" or "Editor"), who had published papers on air cleaning, which included measuring gases and particles in test rooms and real environments. Doc. No. 337-9 at 22-24, 226. Blocken first "prescreened" the Article, which he described as "look[ing] at the title, abstract and the contents of the paper to . . . check if important components are present . . . state of the art, knowledge gap, whether a proper methodology was followed, and whether there are very clear deficiencies that would render this

paper to have to be desk rejected.” *See id.* at 226-27. The Article passed his initial review, and he sent the Article to be reviewed. *Id.*

Three reviewers agreed to review the Article, Angus Shiue (“Reviewer 1”), Shun-Cheng Lee (“Reviewer 2”), and Ryan LeBouf (“Reviewer 3”). *See* Doc. No. 337-13. GPS does not allege that any of the reviewers were unqualified to conduct the review. The reviewers used a standard BAE form to provide their comments to the Editor. *Id.* In the form, the reviewer provides:

- a “Recommendation Term” (“Accept,” “Minor Revision,” etc.);
- an “Overall Reviewer Manuscript Rating” (a score between 0-100, with 50 or more considered to be a passing score);
- answers on a scale of 1-5 (1,5 = “fails/succeeds by a large amount,” 2,4 = “fails/succeeds by a small amount” and 3 = “neutral”) to a series of “Custom Review Questions” (including whether the subject is “worthy of investigation,” “the research method was solid and proven” and “the conclusions were supported by the data”); and
- specific comments to the editor and the author.

Doc. Nos. 337-13; 337-9 at 110-111, 234-236. The authors only receive the reviewer’s written comments. Doc. No. 337-9 at 110-111.

Reviewer 1’s initial recommendation was “Major Revision,” with an overall score rating of 55. Doc. No. 337-13 at 4. In response to all but one of the “custom questions” he gave a score of “4” “Succeeds by a small amount” (with a neutral score of 3 to the statement “the English is satisfactory.” He provided nine specific comments to the authors. *Id.* at 5. The Editor viewed this as a “meaningful review.” Doc. No. 337-9 at 234.

Reviewer 2's top-line recommendation was "Reject," but he gave the Article an overall passing score of 50. His answers to the "custom questions" varied widely, with scores of "1" for "the information presented was new" and "the English is satisfactory" to "4" for a key substantive question, "the conclusions were supported by the data." The most common score was "3" – neutral. No specific comments were provided to the authors or the Editor to explain his recommendation or to revise the Article. Doc. No. 337-13 at 6. Accordingly, the Editor believed that the review was "inconsistent in a very large degree," "doesn't make sense" (because a passing score was being given with a "reject" recommendation), and "it almost seems that some of the[] numbers [were] put in at random." Doc. No. 337-9 at 235. He also characterized it as "an empty review" because it provided no justification or comments that might improve the Article. It was, in the Editor's view, the "opposite" of a meaningful review and was "discarded." *Id.* at 236-237. However, with two remaining "meaningful reviews," the Editor did not seek to replace Reviewer 2. *Id.* at 237.

Reviewer 3 gave the most positive initial review, recommending only a "Minor Revision" and giving the Article an overall score of 85. Doc. No. 337-13 at 7. He scored all of the questions as "4," with one "5." *Id.* Then, he provided numerous specific comments. *Id.* at 7-8. The Editor considered this the second meaningful review. Doc. No. 337-9 at 238, 240. With one "Major Revision" and one "Minor Revision," Blocken sent the Article to the authors with the reviewer's comments, asking that it be revised. *Id.* at 249-251.

The authors revised the Article and resubmitted it to BAE in late January 2021. *See* Doc. No. 337-14. Blocken believed the authors had responded to the comments and sent the revised Article to Reviewers 1 and 3 for their further consideration. *See* Doc. Nos. 337-9 at 241-43; 337-14. However, Blocken did not send it to Reviewer 2 because he had discarded the review and believed that "it would serve no purpose to try to ask a reviewer that clearly indicated that he or

she is not interested in helping the journal and editor in this case to ask this person again.” Doc. No. 337-9 at 246.

Reviewer 3’s review of the revised Article changed his recommendation to “Accept,” increased the number of “5” score responses to the review questions (including to the statement that “the conclusions were supported by the data”) but kept the same overall score of 85. In the comments section, he listed no further comments saying, “Thank you for your consideration of the comments. Revisions are acceptable.” Doc. No. 337-13 at 11. Reviewer 1’s review of the revised Article was mixed.¹ The reviewer kept the same recommendation of “Major Revision,” but increased his overall score more than 25% from 55 to 70. Despite the increased overall score, the review reduced the scoring of the review questions from the previous scores of “4” to “2” in every category. Then, back again in a positive direction, the review reduced the number of comments from 9 original comments to only 3, which Blocken interpreted to be “very light comments.” *See id.* at 9-10; Doc. No. 337-9 at 247. Still, he again sent the Article back to the authors with the comments asking that further revisions be considered. Doc. No. 337-9 at 247.

The authors responded again with a second revised manuscript. After his review of the second set of revisions, Blocken believed the authors had successfully addressed Reviewer 1’s comments “100 percent.” *Id.* at 249-50 (describing edits addressing “minor concern” on “analysis of the distribution of the ions throughout this test volume”); *id.* at 250 (describing edits addressing comment on “measuring the ozone concentration”). So, he exercised his editorial discretion to accept the Article. *See id.* at 248-255 (“If we get full compliance [with the review comments], then it’s not needed to prolong the handling process any further. That [when] the editor can make his

¹ The Court notes that the Parties did not depose any of the reviewers so the record contains no further explanation beyond the plain (but sometimes inconsistent) language/scoring in the reviews and Blocken’s testimony as to his interpretation and reaction.

or her own decision to proceed.”). Blocken then sent an acceptance letter to the Article’s authors on February 24, 2021. Doc. No. 337-15 at 2. Finally, Dr. Blocken provided his positive recommendation to the editor-in-chief of BAE, who then approved publication based on that recommendation. *Id.*; Doc. No. 337-9 at 256. The Article was first published online on March 7, 2021. Doc. No. 233-1.

E. Elsevier’s “Peer Review” Advertising

Elsevier regularly advertised its journals as “peer reviewed.” *See e.g.*, Doc. No. 376-10, 376-15, 376-17 (claiming a “rigorous peer review process”); 376-18 at 1009. This marketing includes social media ads touting a “rigorous editorial and peer review” process. Doc. No. 379-1.

F. GPS’s Claims and Procedural Background

GPS alleges that the Article’s statements concerning how GPS’s bipolar ionization technology performed during testing are false and “devastated” their business because “many of GPS’s customers paused, canceled, or stopped orders” as a result of the Article. *See* Doc. No. 327 at 4. In January 2022, it filed this action against Elsevier LTD, the company that owns and publishes BAE and Elsevier Inc. (a company which GPS contends is liable as its alter ego), asserting that Defendants are liable for defamation and unfair and deceptive trade practices under North Carolina law. Doc. No. 1. No claim is asserted against the Article’s authors, even though GPS repeatedly criticizes their testing, writing and intentions.² The unfair trade practices claim was dismissed for failure to state a claim in July 2025. Doc. No. 102. The case was reassigned to the undersigned in January 2026, and in June 2026, the Court permitted GPS to file a Second Amended Complaint, adding a claim for violation of the Lanham Act. Doc. Nos. 232, 233.

² The subjective intent of the authors is admittedly not relevant to GPS’s claims against Elsevier, and GPS acknowledged at oral argument there is no evidence that Elsevier was aware of the authors’ alleged bias against GPS. *See* Doc. No. 397 at 60-61.

The Parties have engaged in extensive and contentious discovery throughout the litigation, and each has had a full and fair opportunity to develop evidence in support of their positions. On September 9, 2026, the Parties filed cross-motions for Summary Judgment, with Elsevier seeking judgment on both of GPS's claims and GPS requesting judgment on numerous affirmative defenses asserted by Elsevier. Following full briefing and oral argument on the motions, they are ripe for the Court's ruling.

III. DISCUSSION

A. Defamation

Defamation is a common law tort, governed here by North Carolina law. To “make out a *prima facie* case for defamation, [the] ‘plaintiff must allege and prove that the defendant made false, defamatory statements of or concerning the plaintiff, which were published to a third person, causing injury to the plaintiff’s reputation.’” *Cannon v. Peck*, 36 F.4th 547, 559 (4th Cir. 2022) (quoting *Griffin v. Holden*, 180 N.C.App. 129, 636 S.E.2d 298, 302 (2006)).

However, since *New York Times v. Sullivan*, 376 U.S. 254 (1964), federal constitutional principles protecting free speech embodied in the First Amendment have limited the imposition of liability for harm against public figures, including “limited purpose public figures.” See *Gertz v. Robert Welch, Inc.*, 418 U.S. 323, 351 (1974). Those public figure plaintiffs must prove, by clear and convincing evidence, that the person who made the “false, defamatory” statement acted with actual malice. See *New York Times*, 376 U.S. at 279–80. “Actual malice” requires a plaintiff to prove that the alleged defamatory statement was made “with knowledge that it was false or with reckless disregard of whether it was false or not.” *Id.* at 280.

First Amendment protections have also been afforded to speech related to scientific inquiry, particularly with respect to matters of public interest. See *Tc Heartland LLC v. Schiffman*,

No. 1:23-CV-665, 2026 WL 1785093, at *2–3 (M.D.N.C. June 22, 2026); *ONY, Inc. v. Cornerstone Therapeutics, Inc.*, 720 F.3d 490, 496 (2d Cir. 2013); *Pacira Biosciences, Inc. v. Am. Soc’y of Anesthesiologists, Inc. (Pacira I)*, 583 F. Supp. 3d 654, 658 (D.N.J. 2022), *aff’d*, 63 F.4th 240 (3d Cir. 2023). To encourage the broad and searching debates necessary for scientific progress, scientific conclusions and opinions cannot be the subject of defamation liability, in the absence of fabricated or dishonestly presented data or methodology. *Id.*

As explained below, the Court finds that, while the broader issue of whether the Article must be protected as scientific opinion is a close question, GPS has failed to prove actual malice, especially not “with convincing clarity.” *See Lewis v. Rapp*, 220 N.C. App. 299, 303, 725 S.E.2d 597, 601 (2012). Therefore, summary judgment will be granted to Elsevier on GPS’s defamation claim.

1. First Amendment Protection of the Article as Scientific Opinion

The First Amendment protects statements that cannot reasonably be interpreted as stating actual facts, *see Snyder v. Phelps*, 580 F.3d 206, 218 (4th Cir. 2009), *aff’d*, 562 U.S. 443 (2011), and statements must “be provable as false before there can be liability under state defamation law.” *Milkovich v. Lorain J. Co.*, 497 U.S. 1, 19–20, (1990). “Opinions,” which are incapable of being proven false, are similarly protected. *Milkovich*, 497 U.S. at 19–20; *see also Craven v. Cope*, 188 N.C. App. 814, 817, 656 S.E.2d 729, 732 (2008). Whether a statement is an actionable fact or an opinion shielded from liability is a question of law for the court based on a fact-specific analysis of a “statement’s language and context to determine if it could be interpreted as asserting a fact.” *Biospherics, Inc. v. Forbes, Inc.*, 151 F.3d 180, 184–86 (4th Cir. 1998) (analyzing fact versus opinion as a matter of law); *see also Potomac Valve & Fitting Inc. v. Crawford Fitting Co.*, 829

F.2d 1280, 1285 n.12 (4th Cir. 1987) (noting that “[w]hether a statement constitutes fact or opinion is a question of law for the trial court to decide.”).

Scientific conclusions often straddle the bounds of the fact-opinion divide. As explained in *ONY*, scientific inquiry by its nature involves engagement with “empirically verifiable facts,” but the conclusions that scientists draw from those facts are “tentative and subject to revision, because they represent inferences about the nature of reality based on the results of experimentation and observation.” *ONY*, 720 F.3d at 496–97. Accordingly, to encourage and safeguard scientific discovery, authors’ statements of scientific analysis and conclusion cannot be grounds for defamation, even if the “facts” or conclusions can be challenged as false or scientifically flawed. *Id.*; see *Tc Heartland*, 2026 WL 1785093, at *2–3. Indeed, the remedy for a plaintiff that disagrees with scientific research is for other scientists to “respond by attempting to replicate the described experiments, conducting their own experiments, or analyzing or refuting the soundness of the experimental design or the validity of the inferences drawn from the results,” leaving “the trial of ideas” to play out in scientific journals and the public square rather than before judges and lay juries who are ill equipped to decide such questions. *Id.*

Still, giving scientific debate room to flourish is not without cost. Companies and individuals may suffer significant commercial or reputational harm when their technology is criticized. Thus, the law carefully limits the reach of First Amendment protection to authentic—albeit potentially “unfair” or “incorrect”—scientific analysis. If the data on which a scientific conclusion are not the true results of actual experiments or the methodology is undisclosed or misrepresented then there is no protection for the resulting opinions or conclusions. See *Pacira I*, 583 F. Supp. 3d at 658 (“scientific conclusions are protected speech to the extent they are ‘draw[n] . . . from non-fraudulent data, based on accurate descriptions of the data and methodology

underlying those conclusions, on subjects about which there is legitimate ongoing scientific disagreement”) (quoting *ONY*, 720 F.3d at 498); *Tc Heartland*, 2026 WL 1785093, at *5, *9-11. Indeed, the law’s reliance on further research and critical analysis to respond to “flawed” scientific findings depends on the study data being truthful—in the sense that it is not fabricated or fraudulently manipulated—and the data and methodology being disclosed. If this is not the case, then not only is a fair assessment of the scientific inquiry not possible, but the authors have also forfeited any claim to constitutional protection. In other words, the law provides ample space for “bad science,”³ but not “fake science.”

There is no credible dispute that the authors of the Article actually conducted the testing of the GPS device as described in the Article. Nor is there a dispute that the data in the Article is based on that testing. Rather, GPS argues that the Article is not entitled to First Amendment protection as scientific research because, inter alia, 1) the alleged falsity in the Article reflects factual errors not complaints about methodology or opinions, 2) the key data presented—the different levels of VOCs after bipolar ionization—is an average of two testing results rather than the actual results (the average is accurate but the testing numbers were not disclosed), 3) certain Q values (which GPS says indicate whether the VOCs were properly identified) were allegedly omitted from the Article or were too low to be valid, 4) the Article could not properly make any

³ Of course, a scientific study that is thought to be clearly mistaken in the present may turn out to be completely correct in the future. From the time of Galileo, whose support for a sun-centered solar system led to his trial in the Inquisition, there have been scientists who were ridiculed and shunned for scientific insights that contradicted conventional “wisdom.” In the 1840s, Ignaz Semmelweis showed that doctors washing their hands drastically cut maternal deaths from childbed fever. He was hounded into an asylum, only to later be vindicated by germ theory. Barry Marshall and Robin Warren argued in the 1980s that *H. pylori* bacteria, not stress or lifestyle, caused most ulcers. The medical establishment dismissed the research. They won the Nobel Prize in Physiology or Medicine for the research in 2005. In short, a breathing space for “wrong” opinions is the essence of scientific discovery, debate and progress that the First Amendment seeks to protect.

conclusion on “cause and effect” with only a single chamber test experiment, and 5) the study lacked basic scientific competence because its experimental design, data collection, and analysis were deficient. *See* Doc. No. 378 at 2-5.

GPS’s final argument belies its first, suggesting that its overall complaints are in fact most related to how the authors designed and carried out the study (and its unflattering conclusions), which were all disclosed in the Article. *See* Doc. No. 233-1; *Tc Heartland*, 2026 WL 1785093, at *9 (rejecting plaintiff’s “fraudulent data” argument because it was “simply . . . another way of framing its disagreement with [defendant’s] methodology and conclusions”). GPS’s “cause and effect” argument also fails because the Article discloses the number of samples taken so readers can draw their own conclusions about the validity of the authors’ conclusions.⁴ Doc. No. 233-1 at 7 (“VOC samples were made with single replicate during outdoor sampling and in duplicate during indoor sampling.”).

Similarly, the Article explains in detail in Appendix 3 how the compounds were identified and the text and Table 3 in the Article explain why the identification is only tentative and reflects “much less certainty in identification and quantification . . . because of high uncertainties in the TICS process.” *Id.* at 8-11, 25 (“Table 3 shows concentrations of organic analytes tentatively identified and pseudo-quantified in the library compound search of spectral peaks detected outside of the TO-15 target list from the SUMMA canister samples.”). This is not fraudulently presented

⁴ Elsevier also argues that the authors “hedged” their conclusions with qualifying language such as saying that the data “appears” to show or “suggests” various conclusions and ultimately calls for further study. However, viewing the Article as a whole, the Court cannot conclude that its qualifying language made its conclusions sufficiently tentative to grant summary judgment on that ground, although it does somewhat undermine GPS’s arguments that the authors acted to intentionally harm GPS (which is, in any event, irrelevant because Elsevier was unaware of any alleged bias).

data. Readers have enough information to decide for themselves whether to believe or disbelieve the study's results based on the presented quality values.

The remaining criticism is the most substantial. The core conclusion of the Article challenged by GPS is that the levels of certain VOCs increased after the air was subjected to the bipolar ionization device. So, the accurate reporting of the amount of VOCs is critical to a reader's ability to evaluate the Article. GPS attacks the reporting of an average of the two indoor air samplings because for at least some of the VOCs the two samples were very different, with one sample reflecting a decrease after ionization and the other representing a substantial increase.⁵ Thus, according to GPS, the results shown in the Article are "fabricated" because none of the values presented were actually observed. The results are neither "fabricated" nor "fraudulent" in this context. They are the accurate average of actual scientific experiments. However, the lack of a disclosure that an average was taken and the fact that the underlying data is not made available to the reader⁶ is concerning. While omitting data does not necessarily make research fraudulent, *see ONY*, 720 F.3d at 494, 499 (holding that scientific opinions were protected by the First Amendment even when the plaintiff alleged that the defendant omitted data); *Pacira I*, 583 F. Supp. 3d at 657–59 (holding that allegations of cherry-picking and omitting data cannot survive a motion to dismiss because the data is nonfraudulent), the absence of this particularly relevant data may have affected the readers' ability to fully assess the study's findings.

⁵ At oral argument, Elsevier explained its position that this variability was the consequence of turbulence in the sampled air. *See* Doc. No. 397 at 23.

⁶ Ironically, GPS's argument that this data was well hidden undercuts their "actual malice" arguments because there is no evidence that Elsevier was given access to or had any reason to know about the supposedly contradictory results (and of course any argument that Elsevier should have taken some notice from the Article itself would similarly apply to any reader).

In summary, it appears that, viewing the evidence in the light most favorable to GPS, the conduct alleged here—while in several respects falling well short of being fabricated or fraudulent data—might possibly justify limiting the full, dispositive First Amendment protection for scientific opinion urged by Elsevier. However, the Court need not (and will not) reach a definitive conclusion on the scope of the Article’s “scientific opinion” protection because, as discussed below, GPS has not shown evidence of actual malice sufficient to support its defamation claim, which independently resolves GPS’s defamation claim in Elsevier’s favor.⁷

2. Common Law Defamation Analysis

a) Is GPS a Limited Purpose Public Figure?

As discussed above, in analyzing GPS’s defamation claim, the Court must first determine—as a matter of law—whether GPS is a public figure. *See Carr v. Forbes, Inc.*, 259 F.3d 273, 278 (4th Cir. 2001); *Rosenblatt v. Baer*, 383 U.S. 75, 88 (1966) (noting that “as is the case with questions of privilege generally, it is for the trial judge in the first instance to determine whether the proofs show respondent to be a ‘public official.’”). Elsevier bears the burden of proving that GPS is a public figure, thereby imposing the requirement that GPS show actual malice to prove defamation. *See Carr*, 259 F.3d at 278. At issue here is whether GPS is a limited purpose public figure with respect to the safety and efficacy of bipolar ionization devices. *See id.*; *Gertz*, 418 U.S. at 351.

“When a [company] thrusts [itself] into the forefront of public debate, [it] is treated as a limited-purpose public figure for purposes of comment on issues arising from that debate.” *Carr*, 259 F.3d at 278. A person is a limited-purpose public figure if (1) “a public controversy gave rise

⁷ This issue would be most important to decide in the context of a defamation claim against the Article’s authors, which again GPS has chosen not to assert here. Unlike Elsevier, the authors would have been aware of the averaging and the underlying data.

to the defamatory statement[.]” and (2) “the plaintiff’s participation in that controversy sufficed to establish him as a public figure within the context of that public controversy.” *Id.*; see *Foretich v. Cap. Cities/ABC, Inc.*, 37 F.3d 1541, 1553 (4th Cir. 1994). A public controversy is “a dispute that in fact has received public attention because its ramifications will be felt by persons who are not direct participants.” *Carr*, 259 F.3d at 279; see *Foretich*, 37 F.3d at 1554. A five-factor test informs whether a plaintiff has become part of a controversy sufficient to trigger limited-purpose public figure status: “whether (1) the plaintiff has access to channels of effective communication, (2) the plaintiff voluntarily assumed a role of special prominence in the controversy, (3) the plaintiff sought to influence the resolution of the controversy, (4) the controversy existed prior to the publication of the defamatory statements, and (5) the plaintiff retained public figure status at the time of the alleged defamation.” *Carr*, 259 F.3d at 280; see *Fitzgerald v. Penthouse Int’l, Ltd.*, 691 F.2d 666, 668 (4th Cir. 1982); *Foretich*, 37 F.3d at 1553. The second and third requirements are most important and have “typically” been combined, to ask, “whether the plaintiff ha[d] voluntarily assumed a role of special prominence in a public controversy by attempting to influence the outcome of the controversy.” *Foretich*, 37 F.3d at 1553; *Reuber v. Food Chem. News, Inc.*, 925 F.2d 703, 709 (4th Cir. 1991) (en banc).

Applying these well-established standards, GPS was a limited purpose public figure in the debate over bipolar ionization technology when the Article was written. First, as detailed above and described in the Article itself, there was an ongoing public controversy about the safety and efficacy of air cleaning technologies, specifically including bipolar ionization. See Doc. No. 233-1 at 2-3; Doc. No. 372-28 at 116, 123–24 (GPS’s founder agreeing that, in “early 2021[.] there was still ongoing debate between ASHRAE, GPS, and members of the public about GPS’s technology”). And GPS was not a bystander or “involuntarily” thrust into the debate. Instead, it

sought to be an opinion leader supporting the technology, using its considerable resources and available channels of communication to challenge ASHRAE Journal articles, Doc. No. 337-33; prepare a white paper, Doc. No. 370-29; and commission testing on COVID-19 effectiveness (which it then touted in press releases). Doc. No. 325-10 at -697; Doc. Nos. 337-23 at 67–68; Doc. No. 337-25 at -201. Accordingly, GPS easily meets all five elements of the limited purpose public figure test with respect to the safety and efficacy of bipolar ionization devices. *See Tc Heartland*, 2026 WL 1785093, at *4 (finding that seller of Splenda was a public figure concerning whether Splenda is safe and healthy based on its regular defense of the product in press releases, responses to contrary findings, and other forums and concluding that “the argument that [the seller] is not a limited-purpose public figure borders on the ridiculous”).

b) Actual Malice

Having affirmatively answered the legal question of whether GPS is a limited purpose public figure, the Court must determine if GPS has proffered clear and convincing evidence that Elsevier acted with actual malice in publishing the Article. *See New York Times*, 376 U.S. at 279–80; *CACI Premier Tech., Inc. v. Rhodes*, 536 F.3d 280, 293 (4th Cir. 2008) (stating that the application of a state’s defamation law is limited by the First Amendment, including by the “actual malice” standard announced in *New York Times*). While the decision to publish the Article might be debatable, there is insufficient evidence for a jury to conclude that Elsevier either knew the Article was falsely defamatory or recklessly disregarded its truth. Therefore, no genuine issue of material fact exists as to actual malice.

“Establishing actual malice is no easy task” because the plaintiff “bears the burden” of proving actual malice “by clear and convincing evidence.” *Carr*, 259 F.3d at 282; *see United States v. Blankenship*, 19 F.4th 685, 757-58 (4th Cir. 2021). “Actual malice” requires a plaintiff to prove

that the alleged defamatory statement was made “with knowledge that it was false or with reckless disregard of whether it was false or not.” *New York Times*, 376 U.S. at 280; *Horne v. WTVR, LLC*, 893 F.3d 201, 211 (4th Cir. 2018). A plaintiff must prove that the defendant had a particular, subjective state of mind at the time the statements were made. *Horne*, 893 F.3d at 211 (citing *St. Amant v. Thompson*, 390 U.S. 727, 731 (1968)). Evidence of personal hostility alone cannot show actual malice, *Cannon*, 36 F.4th at 568; rather, “[t]here must be sufficient evidence to permit the conclusion that the defendant in fact entertained serious doubts as to the truth of his publication.” *St. Amant*, 390 U.S. at 731; *Lewis*, 220 N.C. App. at 303; *CACI*, 536 F.3d at 300 (“[T]here must be sufficient evidence to permit the conclusion that the defamatory statement was made with [a] high degree of awareness of [its] probable falsity.”) (quotation omitted). Reckless conduct is not measured by whether a reasonably prudent [person] would have published [or spoken], or would have investigated before publishing [or speaking]. See *CACI*, 536 F.3d at 300. A showing of actual malice requires “concrete” evidence, *Blankenship*, 19 F.4th at 758 (quoting *Anderson*, 477 U.S. at 256), which “must produce an ‘abiding conviction’ that actual malice is ‘highly probable,’” *id.* (quoting *Cannon*, 36 F.4th at 566).

As described at length above, there is no allegation that Elsevier had actual knowledge of any falsity in the Article, and Elsevier’s publication process for the Article was not reckless. Elsevier assigned the Article to a qualified editor, who reviewed the Article and then selected three qualified and independent reviewers to “peer review” the Article. While their ultimate publication recommendations varied, each reviewer (even the reviewer who the Editor decided had not written a “meaningful” review, but recommended “reject”) gave the Article a passing score—with two scores at 70 or above—and stated their belief at least once that the Article “succeeds by a small amount” with respect to the statement “the conclusions were supported by the data.” There was no

report or question raised about any “falsity” in the Article (which GPS claims was hidden and undisclosed as discussed above). Based on the reviewers’ feedback and his own assessment, the Editor sent the Article back to the authors twice for revision. He then determined that the authors had sufficiently revised the Article or explained why they had not. Finally, he exercised his editorial discretion to approve publication of the Article, and Elsevier accepted his recommendation. Although it is always true that a different decision on publication could have been made, nothing in these undisputed facts suggests, much less establishes with the required level of certainty or high probability, that Elsevier acted with a reckless disregard of the falsity of the Article.

GPS grounds its effort to show actual malice on its argument that Elsevier was reckless because it knew that the Editor was too overworked to do his job properly. GPS’s “overwork” argument stretches too broadly. Regardless of the Editor’s overall workload, the question here is whether Elsevier and the Editor—with respect to this Article and only this Article—acted “with a high degree of awareness of its probable falsity.” That is, the Editor could have failed to do his job on every other article he was assigned, but if he handled the disputed Article without actual malice (as discussed above) then GPS’s claim fails. And so it does here.

Elsevier may be too focused on its profitability at the expense of a more careful review of its published articles and its editors may be overworked, but there is no authority for the proposition that those allegations standing alone can support a finding of actual malice in the absence of particularized evidence showing that Elsevier entertained serious doubts about the veracity of the Article. Otherwise, every harried editor and commercially driven publisher (which the Court hazards to guess includes most all of them) would be at risk of a jury verdict of defamation for every scientific study in which undisclosed errors are later found. Such a result is

the antithesis of “*actual* malice” and cannot be accepted without undermining the search for elusive scientific “truth.” See *Underwager v. Salter*, 22 F.3d 730, 736 (7th Cir. 1994) (“Scientific truth is elusive”. . . “[m]ore papers, more discussion, better data, and more satisfactory models—not larger awards of damages—mark the path toward superior understanding of the world around us.”). Summary judgment will be granted to Elsevier on GPS’s defamation claim.

B. Lanham Act

GPS alleges that Elsevier’s advertisement of its scientific journal articles as “peer reviewed” violates the Lanham Act, 15 U.S.C.A. § 1125(a). The statute prohibits the “false or misleading description of fact, or false or misleading representation of fact, which ... in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person’s goods, services, or commercial activities.” 15 U.S.C.A. § 1125(a)(1)(B). Thus, a plaintiff asserting a false advertising claim under the Lanham Act must establish that:

(1) the defendant made a false or misleading description of fact or representation of fact in a commercial advertisement about his own or another’s product; (2) the misrepresentation is material, in that it is likely to influence the purchasing decision; (3) the misrepresentation actually deceives or has the tendency to deceive a substantial segment of its audience; (4) the defendant placed the false or misleading statement in interstate commerce; and (5) the plaintiff has been or is likely to be injured as a result of the misrepresentation, either by direct diversion of sales or by a lessening of goodwill associated with its products.

PBM Prods., LLC v. Mead Johnson & Co., 639 F.3d 111, 120 (4th Cir. 2011) (quoting *Scotts Co. v. United Industries*, 315 F.3d 264, 272 (4th Cir. 2002)).

First, although Elsevier needlessly resists acknowledging it, Elsevier’s frequent marketing of its journals, including BAE, as “peer reviewed” is “commercial advertising”⁸ within the meaning of the Lanham Act. *See Handsome Brook Farm, LLC v. Humane Farm Animal Care, Inc.*, 700 F. App’x 251, 256, 258-60 (4th Cir. 2017). To be a commercial advertisement, a statement must be (1) “commercial speech” (2) “for the purpose of influencing consumers to buy goods or services” that is (3) “sufficiently disseminated to the relevant purchasing public to constitute advertising or promotion within that industry.” *Id.* While the journals themselves are intended to promote scientific inquiry, the advertisements touting them as “peer reviewed” are part of Elsevier’s commercial marketing and published with the intent of encouraging the purchase of journal subscriptions. Further, the statements are widely disseminated so as to constitute advertising or promotion. Therefore, Elsevier’s marketing of the journals as “peer-reviewed” is commercial advertising subject to the Lanham Act.

However, there is insufficient evidence that the statements are false or misleading to support GPS’s claim. Under the Lanham Act, “the contested statement or representation must be either false on its face or, although literally true, likely to mislead and to confuse consumers given the merchandising context.” *PBM Prods.*, 639 F.3d at 120 (quoting *C.B. Fleet Co. v. SmithKline Beecham Consumer Healthcare, L.P.*, 131 F.3d 430, 434 (4th Cir.1997)). Where the advertisement is literally false, a violation may be established without evidence of consumer deception. *See id.* But if “a plaintiff’s theory of recovery is premised upon a claim of implied falsehood, a plaintiff must demonstrate, by extrinsic evidence, that the challenged [advertisements] tend to mislead or

⁸ However, one of the Elsevier statements that GPS heavily relies on—papers “will be peer reviewed to ensure both accuracy and relevance”—is not a commercial advertisement to potential subscribers but instead is taken out of context from a “Guide for Authors,” which is directed towards authors who are considering submitting a paper to Building and Environment. *See* Doc. No. 376-11.

confuse consumers.” *Id.* (quoting *Johnson & Johnson Merck Consumer Pharm. Co. v. Smithkline Beecham Corp.*, 960 F.2d 294, 297 (2d Cir.1992)); *see also Abbott Labs. v. Mead Johnson & Co.*, 971 F.2d 6, 14 (7th Cir. 1992) (“[A] court may find on its own that a statement is literally false, but, absent a literal falsehood, may find that a statement is impliedly misleading only if presented with evidence of actual consumer deception.”).

“In analyzing whether an advertisement . . . is literally false, a court must determine, first, the unambiguous claims made by the advertisement . . . , and second, whether those claims are false.” *Scotts*, 315 F.3d at 274 (quoting *Novartis Consumer Health v. Johnson & Johnson–Merck Consumer Pharmaceuticals*, 290 F.3d 578, 586 (3d Cir.2002)). “A literally false message may be either explicit or conveyed by necessary implication when, considering the advertisement in its entirety, the audience would recognize the claim as readily as if it had been explicitly stated.” *Id.*

The evidence shows that a reasonable jury could not find that Elsevier’s peer-review ads are false or misleading. First, they are not “literally” false. As detailed above, the Article was “peer reviewed,” even though GPS does not like the outcome of the process (i.e., publication). Contrary to GPS’s contention, the undisputed evidence shows that the peer review process for the Article was not a sham or a “failed” review. Three independent, qualified reviewers were selected to review the Article and they did so, although one of the reviews was not considered “meaningful” and was subsequently ignored. All the reviewers gave the Article a passing score and their comments were considered in two revisions of the Article prior to its acceptance for publication. This is plainly a “peer review.”

GPS’s reliance on cases in which advertisements promise compliance with a publicly recognized regulatory or statutory standard, such as “FDA approved,” misses the mark. *See Eastman Chem. Co. v. Plastipure, Inc.*, 775 F.3d 230, 236 (5th Cir. 2014). GPS cites to no such

clear legal standard (or even a specific widely accepted public definition) with respect to the details of what constitutes a “peer review”; instead, it points to Elsevier’s publication protocols, which were indisputably private, not included in any advertisement and, in any event, flexible “guidelines” rather than rigid rules.⁹ Thus, the advertisements could not reasonably be found to be literally false.

To satisfy the first element of a Lanham Act claim without showing literal falsity, “a plaintiff must demonstrate, by extrinsic evidence, that the challenged advertisements tend to mislead or confuse consumers.” *Scotts*, 315 F.3d at 273; see *Design Res., Inc. v. Leather Indus. of Am.*, 789 F.3d 495, 501 (4th Cir. 2015) (A statement “true on its face” is impliedly false under the Lanham Act when “it would likely mislead consumers.”). Specifically, plaintiff must present evidence showing “actual consumer deception” and that a “substantial portion of the audience” was misled. *Id.* at 276. Consumer confusion “is most often proved by consumer survey data.” *Id.*; see *PharmaNetics, Inc. v. Aventis Pharms., Inc.*, No. 5:03-CV-817-FL(2), 2005 WL 8159274, at *11 (E.D.N.C. Mar. 9, 2005).

Applying this standard, no reasonable jury could find the advertisement to be “misleading” to a “substantial portion” of the relevant audience based on the evidence in the record. GPS’s evidence that consumers were misled consists of its corporate representative’s testimony that

⁹ Accepting GPS’s attempt to set the legal standard for “peer review” (or reckless disregard in connection with its defamation claim) based on Elsevier’s publication guidelines would also set a dangerous precedent. If liability is imposed on these claims for the failure to follow internal guidelines in the absence of evidence that otherwise satisfied the established legal standard, then publishers will in the future simply limit their peer review process to whatever bare minimum might be acceptable to avoid liability. This race to the bottom risks significantly degrading rather than promoting vigorous peer review, to the detriment of scientific research.

customers viewed peer-reviewed articles as “beyond reproach” and “gospel”;¹⁰ its expert’s testimony as to the meaning of “peer review” to scientists, and the testimony of three of Elsevier’s customers that it was important to them that the Article was “peer reviewed,” although they didn’t testify that they saw Elsevier’s advertisements. *See* Doc. Nos. 367-4 at 166, 367-8 at 305-306, 367-9 at 267, 367-15 at 185-186. However, at oral argument GPS’s counsel admitted that there was no evidence that any BAE subscriber, whom she acknowledged as the relevant audience, felt misled by the peer review advertising. *See* Doc. No. 397 at 78.

Also, the question here is more nuanced than whether any portion of the audience thought that a peer review statement made the Article more credible. Again, to satisfy its burden, GPS must establish that a substantial portion of individual subscribers had specific relevant beliefs as to how a peer review would be conducted (if in fact they had any view at all) and that the publication process for the Article materially varied from that understanding so that they were misled. Even putting aside the absence of admissible survey evidence, the evidence in the record proffered by GPS wholly fails to establish this showing. For example, there is no evidence that any subscriber or customer was given a fair summary of the details of the Article’s peer review process¹¹—both

¹⁰ The Court notes that GPS’s counsel’s definition of peer review, which appears to be that a majority of reviewers approved publication, falls well short of reviewers actually opining on the “truth” or “validity” of scientific research. Thus, consumers (at least the few GPS customers who testified) may have an unrealistic view of the peer review process such that they would also be “misled” even under GPS’s definition.

¹¹ The details matter. Under GPS’s “majority approval” definition of peer review, two reviews of a scientific paper, one an approval for publication by a Nobel laureate in the field after a thorough review and the other a recommendation of rejection without justification, would not be considered a valid peer review. Yet, few, if any, would think that a paper positively reviewed by a Nobel laureate had not been peer reviewed.

those that support publication and those that might not—and still concluded that the Article had not been peer reviewed, even if they might disagree with the decision to publish the Article.¹²

Further, with respect to the uncertain definition of a peer review, how many in the relevant audience believed that a peer review can involve approval by a single reviewer, had a view as to what should happen if there are two reviewers and they disagree, or would allow an editor to exercise his or her discretion to ignore a review that includes no justification for a recommendation not to publish? None of these questions are answered by the evidence, and it would be inappropriate to allow a jury to speculate—which is all they could do—on whether a substantial portion of the relevant audience was misled by Elsevier’s advertising.

Finally, there is an absence of evidence that would support the required causal connection between the harm for which GPS seeks to recover and the challenged advertisements. Specifically, there is no evidence that any GPS customer saw or heard about an Elsevier advertisement. Indeed, the customers may have simply assumed that all scientific studies in academic journals are peer reviewed, as GPS’s counsel acknowledged at oral argument. *See* Doc. No. 397 at 86 (“It’s academic journals. They say they are peer reviewed. So this is sort of – if you’ve ever seen an academic journal, you simply assume this.”). And again, there is no survey evidence to support causation. *See* Doc. No. 397 at 86 (GPS counsel stating, “I mean, frankly, that’s why surveys are so frequently used is they artificially expose customers to the advertisements because you don’t have direct customer testimony that I saw this advertisement and saw this.”).

¹² GPS often confuses and conflates the peer review process with the decision to publish. A journal article may be peer reviewed but not published for many reasons unrelated to its scientific merits; for example, it is too long, written in poor English or just thought to be uninteresting. Conversely, an article in a scientific journal might be published without peer review if it simply reflects an author’s opinion, such as a commentary on a topic of scientific interest or a biographical piece on another scientist.

In practical effect, GPS's Lanham Act evidence can be summarized as follows: Elsevier advertised that its scientific journal are peer reviewed; GPS contends that the Article did not "pass" peer review based on GPS's subjective definition (which ignores substantial evidence to the contrary); a few customers agree that the Article didn't pass peer review (again according to GPS's definition and without being told the full story); GPS customers in general believe that a peer reviewed article is true or at least more credible; and the Article is false and caused "many" customers not to do business with GPS; therefore, Elsevier is liable for more than a billion dollars in "diminution in the value of its business" – not specific customer lost sales – as harm from the Elsevier "peer review" advertising. Even ignoring the obvious effect of accepting this thin evidence of "misleading advertising" and causation as an end run around the actual malice defamation standard, the evidence does not satisfy GPS's burden to prove that a substantial portion of the relevant audience was misled by Elsevier's advertisement or that there is a sufficient causal connection between the advertisements and GPS's alleged damage to its business valuation. Therefore, Elsevier is entitled to summary judgment on the Lanham Act claim.

C. Claims Against Elsevier, Inc.

Elsevier, Inc. also separately seeks summary judgment on the grounds that it does not own BAE and cannot be held liable for the Article it did not publish. GPS responds that its claims against both Elsevier entities should be allowed to proceed because the two corporations "hold themselves out and operate as one single business." In light of its ruling that the Elsevier parties' joint motion for Summary Judgment will be granted on the merits, the Court need not and will not decide this corporate responsibility issue (although it notes that many large companies with numerous subsidiaries operate "as one single business" in the eyes of the outside world and many of their employees).

D. Unsealing of Filings Under Seal

As explained by the Court at the hearing on these motions and in its earlier order on the Parties' various motions to seal, Doc. No. 382 at 7-8, the Parties have excessively filed memoranda, documents, and other exhibits under seal in violation of the strict legal principles applicable to publicly filed motions, in particular dispositive motions at summary judgment (including, incredibly, press releases and other obviously public documents). *See Reetz v. Lowe's Companies, Inc.*, No. 5:18-cv-00075-KDB-DCK, 2021 WL 3354167, at *1 (W.D.N.C. Aug. 2, 2021). Under the governing First Amendment standard, a "denial of access" to publicly filed documents "must be necessitated by a compelling . . . interest and narrowly tailored to serve that interest." *Rushford v. New Yorker Magazine, Inc.*, 846 F.2d 249, 253 (4th Cir. 1988); *see also Jones v. Lowe's Companies, Inc.*, 402 F. Supp. 2d 266, 278 (W.D.N.C. 2019) (explaining that although the First Amendment standard as expressed in *Rushford* relates to compelling government interests, "courts have recognized that . . . 'private interests might also implicate higher values sufficient to override . . . the First Amendment presumption of public access'" (quoting *Level 3 Commc'ns, LLC v. Limelight Networks, Inc.*, 611 F. Supp. 2d 572, 580 (E.D. Va. 2009))). Accordingly, a party moving to seal documents filed in support of summary judgment in a civil case bears a heavy burden. *See Rushford*, 846 F.2d at 252 (applying the First Amendment right of access standard to summary judgment filings and noting "summary judgment adjudicates substantive rights and serves as a substitute for a trial"); *Jennings v. Univ. of N. Carolina at Chapel Hill*, 340 F. Supp. 2d 679, 681 (M.D.N.C. 2004) (applying rule requiring open access to filed documents in connection with dispositive summary judgment motion).

Having reviewed the Parties' summary judgment submissions, the Court finds that all memoranda and exhibits filed under seal should be refiled in unredacted form and linked to the

original filed sealed exhibit on the schedule described below. The Court will allow the Parties a short period of time to file very limited and narrowly tailored requests to maintain the sealing or partial sealing of specific filings and exhibits, other than the Parties' memoranda of law and any exhibit specifically cited in this order.

IV. ORDER

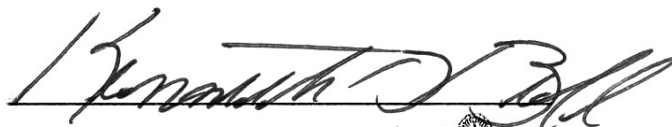
NOW THEREFORE IT IS ORDERED THAT:

1. Defendants' Motion for Summary Judgment (Doc. No. 323) is **GRANTED** as described above;
2. Summary Judgment is **GRANTED** to Defendants on all of Plaintiff's claims;
3. Plaintiff's Motion for Summary Judgment (Doc. No. 324) is **DENIED** as moot;
4. The Parties are directed to refile—on or before October 26, 2026—an unredacted copy of any memoranda in support of or in opposition to the Parties' Summary Judgment motions and any exhibit specifically cited in this Order that were filed under seal. All refiled documents must be linked to the originally sealed filing. All remaining sealed exhibits filed in connection with the Parties' Motions for Summary Judgment must be similarly refiled and linked on or before 14 days from the date of this Order, unless otherwise ordered by the Court. The Parties may file under seal very limited and narrowly tailored requests to maintain the sealing of any of the remaining sealed exhibits on or before 10 days after the date of this Order;
5. All other pending motions in this matter are **DENIED** as moot; however, the Parties' motions to seal filed in connection with mooted motions are **GRANTED** (Doc. Nos. 364, 381); and

6. The Clerk is directed to close this matter in accordance with this Order.

SO ORDERED ADJUDGED AND DECREED.

Signed: October 22, 2026

A handwritten signature in black ink, appearing to read "Kenneth D. Bell", written over a horizontal line.

Kenneth D. Bell
United States District Judge

