PUBLISHED

UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

No. 14-1724

In re: GNC CORPORATION; TRIFLEX PRODUCTS MARKETING AND SALES PRACTICES LITIGATION (NO. II)

YVONNE BROWN; SHAWN HOWARD, on hehalf of themselves and all others similarly situated; MICHAEL LERMA, On Behalf of Themselves and All Others Similarly Situated; JEREMY GAATZ, On Behalf of Themselves and All Others Similarly Situated; ROBERT TOBACK; ROBERT CALVERT; THOMAS FLOWERS; JOHN J. GROSS; JUSTIN M. GEORGE; LOUIS LASTRES, on behalf of themselves and all others similarly situated,

Plaintiffs - Appellants,

v.

GNC CORPORATION, a Delaware Corporation; GNC HOLDINGS, INC.; RITE AID CORPORATION,

Defendants - Appellees.

Appeal from the United States District Court for the District of Maryland, at Baltimore. J. Frederick Motz, Senior District Judge. (1:14-md-02491-JFM)

Argued: March 25, 2015 Decided: June 19, 2015

Before NIEMEYER and FLOYD, Circuit Judges, and HAMILTON, Senior Circuit Judge.

Affirmed by published opinion. Judge Floyd wrote the opinion, in which Judge Niemeyer and Senior Judge Hamilton joined.

ARGUED: Robert Jeffrey Berg, DENLEA & CARTON LLP, White Plains, New York, for Appellants. Joseph R. Palmore, MORRISON & FOERSTER, LLP, Washington, D.C., for Appellees. **ON BRIEF:** E. Duncan Getchell, Jr., Richmond, Virginia, Gordon W. Schmidt, Courtney S. Schorr, MCGUIREWOODS, LLP, Pittsburgh, Pennsylvania, for Appellees.

FLOYD, Circuit Judge:

Appellants are consumers who purchased joint health supplements produced and sold by GNC and Rite Aid. The supplements all contain glucosamine and chondroitin, and most contain additional purportedly active ingredients. Appellants allege that GNC and Rite Aid have violated the consumer protection laws of various states by marketing these supplements as promoting joint health, even though many scientific studies have shown that glucosamine and chondroitin are no more effective than a placebo in treating the symptoms of osteoarthritis. GNC and Rite Aid moved to dismiss the complaint for failure to state a claim, arguing that the complaint failed to adequately plead the falsity of the allegedly misleading marketing representations. The district court granted the motion in full. Because marketing statements that accurately describe the findings of duly qualified and reasonable scientific experts are not literally false, we affirm.

I.

Michael Lerma, Jeremy Gaatz, Robert Toback, Robert Calvert, Shawn Howard, Thomas Flowers, John Gross, and Justin George (collectively "Plaintiffs") purchased a variety of joint health supplements produced by General Nutrition Corporation and GNC Holdings, Inc. (collectively "GNC") and Rite Aid Corporation

("Rite Aid"). In putative class actions filed in federal courts in several states, they alleged that the supplements are ineffective as marketed and that GNC and Rite Aid ("the Companies") violated various state consumer protection, deceptive advertising, and express warranty statutes by misrepresenting the effectiveness of the supplements.[1] The Judicial Panel on Multidistrict Litigation transferred three of these actions (and two tag-along actions) to the United States District Court for the District of Maryland for coordinated or consolidated pretrial proceedings. Plaintiffs' counsel established a leadership structure and filed a Consolidated Amended Complaint (CAC), at issue in this appeal.[2] Because this case comes to us on a motion to dismiss for failure to state a claim, we state the facts as alleged in the CAC and assume them to be true. Zak v. Chelsea Therapeutics Int'l, Ltd., 780 F.3d 597, 601 (4th Cir. 2015).

GNC manufactures, markets, distributes, and sells a line of joint health dietary supplements under the brand name TriFlex:

[1] The GNC plaintiffs (Lerma, Gaatz, Toback, Howard, and Calvert) bring Counts I through VIII. The Rite Aid plaintiffs (Flowers, George, and Gross) bring Counts IX through XIII.

[2] Although Brown v. GNC Corp., 13-05890 (N.D. Cal. filed Dec. 19, 2013), was also transferred to the district court by the Multidistrict Litigation Panel, the CAC does not include Yvonne Brown (the plaintiff in that action) among the named plaintiffs.

GNC TriFlex; GNC TriFlex Fast-Acting; GNC TriFlex Sport; and GNC TriFlex Complete Vitapak. All of the products contain the compounds glucosamine hydrochloride and chondroitin sulfate ("glucosamine and chondroitin"). They also all contain the ingredients methylsulfonyl-methane (MSM) and hyaluronic acid (HA). TriFlex Fast-Acting and TriFlex Sport also contain a variety of purportedly beneficial herbs, including white willow bark extract, hops cones extract, and Chinese skullcap root extract. Finally, TriFlex Complete Vitapak contains tablets of TriFlex Fast-Acting along with separate fish oil, willow bark, and MSM supplements.

The TriFlex product labels represent that the supplements "promote[] joint mobility & flexibility," "protect[] joints from wear and tear of exercise," "rebuild[] cartilage and lubricate[] joints," and provide "[m]aximum strength joint comfort." J.A. 30, 189–93. The product label for TriFlex Fast-Acting also represents that the product was "[c]linically studied" by means of a "12-week multi-center, randomized, double-blind, placebo controlled study of 60 adults . . . taking 250 mg/day of the GNC TriFlex Fast-Acting Blend" and was "shown to improve joint comfort and function." J.A. 193. The TriFlex Fast-Acting label includes a chart representing that TriFlex Fast-Acting provides a 20% improvement in joint function and 25-30% improvement in joint flexibility. Id.

Rite Aid markets, distributes, and sells a line of house-brand joint health dietary supplements: Rite Aid Glucosamine/Chondroitin; Rite Aid Natural Glucosamine/Chondroitin; Rite Aid Glucosamine Chondroitin Advanced Complex; Rite Aid Glucosamine Chondroitin, Triple Strength + MSM; Rite Aid Glucosamine Chondroitin + MSM; and Rite Aid Glucosamine Chondroitin Advanced Complex with HA. The Rite Aid products are manufactured by GNC, and GNC is contractually obligated to indemnify Rite Aid for the claims at issue here. All of the Rite Aid products contain glucosamine and chondroitin. All of the products except Rite Aid Glucosamine/Chondroitin and Rite Aid Natural Glucosamine/Chondroitin also contain MSM, HA, and various purportedly beneficial herbs including Chinese skullcap root extract, black catechu, and boswellia serrata gum extract. All of the products represent either that they "promote[] joint health" or that they "help[] rebuild cartilage and lubricate joints." J.A. 195–205.

The named plaintiffs purchased several of the GNC and Rite Aid products in a number of states. No plaintiff alleges that he or she was harmed by consuming the products, or that the products did not contain the advertised quantities of glucosamine and chondroitin. Rather, Plaintiffs allege that the products are incapable of providing the advertised joint health

benefits, and that they would not have purchased the products but for the Companies' false advertising. They therefore bring suit on behalf of themselves and similarly situated purchasers under the consumer protection laws of their states.

Lerma, a California resident, purchased TriFlex Fast-Acting in California and brings Counts II and III under California's Unfair Competition Law, Cal. Bus. & Prof. Code § 17200 et seq., and Consumers Legal Remedies Act, Cal. Civ. Code § 1750 et seq. Gaatz, an Illinois resident, purchased TriFlex Sport in Illinois and brings Count IV under Illinois's Consumer Fraud and Deceptive Business Practices Act, 815 Ill. Comp. Stat. 505/1 et seq. Toback, a Florida resident, purchased TriFlex Complete Vitapak in Florida and brings Count V under the Florida Deceptive and Unfair Trade Practices Act, Fla. Stat. § 501.201 et seq. Calvert, an Ohio resident, purchased TriFlex Fast-Acting in Ohio and brings Count VIII for breach of express warranty under Ohio's UCC, Ohio Rev. Code Ann. § 1302.26. Howard, a New York resident, purchased TriFlex Fast-Acting in New York and brings Counts VI and VII under New York's deceptive business practices statute, N.Y. Gen. Bus. Law § 349, and false advertising statute, N.Y. Gen. Bus. Law § 350. Flowers, a California resident, purchased unspecified Rite Aid products in California and brings Counts X and XI under California's Unfair Competition Law and Consumers Legal Remedies Act. Gross, a New

Jersey resident, purchased unspecified Rite Aid products in New Jersey and brings Count XII under the New Jersey Consumer Fraud Act, N.J. Stat. Ann. § 56:8-1 et seq. And finally, George, a Pennsylvania resident, purchased Rite Aid Natural Glucosamine/Chondroitin in Pennsylvania and brings Count XIII under Pennsylvania's Unfair Trade Practices and Consumer Protection Law, 73 Pa. Stat. Ann. § 201-1 et seq.

In essence, Plaintiffs allege that the various health representations made on the products' packaging are false because "the vast weight of competent and reliable scientific evidence" indicates that glucosamine and chondroitin do not provide the promised health benefits. J.A. 33. In support of this conclusion, Plaintiffs cite a number of peer-reviewed published studies that collectively show that "glucosamine and chondroitin[] are ineffective at treating the symptoms of osteoarthritis, whether taken alone or in combination with each other." J.A. 23. Plaintiffs note that while the cited studies were performed on patients with arthritis, "experts in the field deem these clinical studies to be appropriate proxies for whether [glucosamine and chondroitin] are effective for . . . both arthritic and non-arthritic users of these ingredients." Id. n.5. Plaintiffs cite at least nine studies that are claimed to show that glucosamine, chondroitin, or both are no more effective than a placebo in relieving the symptoms

of arthritis. Plaintiffs also cite two studies that purportedly show that MSM is no more effective than a placebo in relieving the symptoms of knee arthritis. The CAC does not include any allegations about the effectiveness of the herbal compounds found in the products, or cite any studies regarding the effectiveness of any of these herbal compounds at relieving the symptoms of arthritis.

The Companies moved to dismiss the CAC for failure to state a claim under Rule 12(b)(6) of the Federal Rules of Civil Procedure. The district court granted the motion in full. The court found that the plaintiffs had failed to plead that "any reasonable expert would conclude from the cited [scientific] studies that glucosamine and chondroitin are ineffective in non-arthritic consumers," and concluded that under all of the state consumer protection laws at issue in this case, "[i]f there are experts who support what [the Companies] say in their advertisements, the advertisements are not false and misleading . . . ." J.A. 248. In other words, the district court held that a manufacturer cannot be liable for false advertising so long as at least one qualified expert opines that the representations made are truthful, even if the overwhelming weight of scientific evidence is to the contrary.

The district court dismissed the CAC without prejudice and expressly granted the plaintiffs leave to re-file if they could

plead (in accordance with Rule 11) that "any reasonable expert would conclude from the cited studies that glucosamine and chondroitin do not improve joint health in non-arthritic consumers." J.A. 249. Plaintiffs declined the court's invitation to amend the CAC and instead timely filed a notice of appeal. We have jurisdiction over final judgments of the district court pursuant to 28 U.S.C. § 1291.[3]

After filing their appeal, Plaintiffs moved for reconsideration by the district court under Rule 60(b)(1) of the Federal Rules of Civil Procedure, arguing that the district court's initial order rested upon a mistake of law.[4] Although we

[3] Under the final order doctrine, we may take jurisdiction over a case dismissed for failure to state a claim only if "the grounds for dismissal clearly indicate that 'no amendment in the complaint could cure the defects in the plaintiff's case.'" Domino Sugar Corp. v. Sugar Workers Local Union 392, 10 F.3d 1064, 1067 (4th Cir. 1993) (brackets omitted). Dismissals without prejudice are generally not appealable final orders. De'lonta v. Johnson, 708 F.3d 520, 523 n.2 (4th Cir. 2013). But if, as here, a plaintiff declines the district court's offer to amend and chooses to stand on his or her complaint, the plaintiff "waive[s] the right to later amend unless we determine that the interests of justice require amendment." Chao v. Rivendell Woods, Inc., 415 F.3d 342, 345 (4th Cir. 2005). Because of Plaintiffs' waiver, we treat this case as if it had been dismissed with prejudice and therefore have jurisdiction over this appeal.

[4] The Rule reads, in relevant part: "On motion and just terms, the court may relieve a party or its legal representative from a final judgment, order, or proceeding for . . . mistake, inadvertence, surprise, or excusable neglect[.]" Fed. R. Civ. P. 60(b)(1).

held in United States v. Williams, 674 F.2d 310, 313 (4th Cir. 1982), that Rule 60 does not authorize motions for correction of a mistake of law, the district court elected not to deny the motion on this ground and instead responded to the substance of the motion. In its order ("the September Order"), the district court reiterated the reasons stated in its initial order dismissing the CAC and added one additional reason: It is unfair to consumers who wish to gamble that glucosamine and chondroitin may be effective if lay juries can effectively ban the sale of glucosamine and chondroitin simply because the evidence of their effectiveness is inconclusive. Plaintiffs did not file a separate notice of appeal with respect to the September Order. However, they now purport to appeal both the initial order and the September Order.

II.

As a threshold matter, we must determine whether we have jurisdiction to consider Plaintiffs' purported appeal of the September Order. Rule 3 of the Federal Rules of Appellate Procedure requires would-be appellants to timely file a notice of appeal with the Court "designat[ing] the judgment, order, or

part thereof being appealed."[5] Fed. R. App. P. 3(c)(1)(B). In a civil case in which the federal government is not a party, a notice of appeal is timely if filed within 30 days after entry of judgment. Fed. R. App. P. 4(a)(1). Plaintiffs timely filed a notice of appeal following the district court's dismissal of the CAC, but did not file an amended notice of appeal or a new notice of appeal within 30 days of the entry of the September Order. They now contend—without the benefit of authority, binding or otherwise—that it would be unfair for this Court to require the filing of a separate notice of appeal following the denial of a post-judgment motion.

Plaintiffs are apparently unaware of the generous tolling provisions of Rule 4 of the Federal Rules of Appellate Procedure, which provides a clear road map for appellants who wish to file a post-judgment motion with the district court before taking their appeal. Appellants who file a motion for reconsideration within 28 days following the district court's entry of judgment may wait to file their notice of appeal until after the disposition of the Rule 60 motion, because the timely

[5] The timely filing of a notice of appeal is not merely a matter of clerical convenience. Rather, it is "an event of jurisdictional significance—it confers jurisdiction on the court of appeals and divests the district court of its control over those aspects of the case involved in the appeal." Griggs v. Provident Consumer Disc. Co., 459 U.S. 56, 58 (1982) (per curiam).

filing of the Rule 60 motion tolls the time for filing an appeal. Appellants who miss this 28-day deadline can still file separate notices of appeal within 30 days of each challenged order and then consolidate the appeals. Fed. R. App. P. 4(a)(4)(A)(vi)&(B); see also Fobian v. Storage Tech. Co., 164 F.3d 887, 891 (4th Cir. 1999) (noting that "any appeal from the denial" of a Rule 60 motion "can be consolidated with the appeal from the underlying order"); 16A Charles Alan Wright & Arthur R. Miller et al., Federal Practice and Procedure, § 3950.4 (4th ed. 2008).

Plaintiffs filed their Rule 60 motion 35 days after the entry of judgment, too late to take advantage of Rule 4 tolling. They also failed to file a separate notice of appeal from the September Order. We therefore grant the Companies' motion to dismiss the appeal of the September Order for want of appellate jurisdiction.

III.

A.

"We review de novo an appeal from a Rule 12(b)(6) dismissal, accepting the complaint as true and drawing reasonable inferences in the [plaintiffs'] favor." Summers v. Altarum Inst., Corp., 740 F.3d 325, 328 (4th Cir. 2014). Rule 8(a)(2) of the Federal Rules of Civil Procedure requires that a

complaint contain "a short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). "[T]he pleading standard Rule 8 announces does not require 'detailed factual allegations,' but it demands more than an unadorned, the-defendant-unlawfully-harmed-me accusation." Ashcroft v. Iqbal, 556 U.S. 662, 678 (2009) (quoting Bell Atl. Corp. v. Twombly, 550 U.S. 544, 555 (2007)). To "state a claim to relief that is plausible on its face," a plaintiff must "plead factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." Id.

B.

In order to state a plausible claim for relief under all of the state consumer protection statutes specified in the CAC, Plaintiffs must plead facts from which we might infer that the representations made on the products' packaging were false, deceptive, or misleading.[6] The district court held that

[6] Crawford v. Franklin Credit Mgmt. Corp., 758 F.3d 473, 490 (2d Cir. 2014)("To state a claim under [New York] GBL § 349, a plaintiff 'must prove three elements: first, that the challenged act or practice was consumer-oriented; second, that it was misleading in a material way; and third, that the plaintiff suffered injury as a result of the deceptive act.'" (quoting Stutman v. Chem. Bank, 95 N.Y.2d 24, 29 (2000))); Virgilio v. Ryland Grp., Inc., 680 F.3d 1329, 1338 n.25 (11th Cir. 2012) ("A consumer claim for damages under [Florida's] FDUTPA has three (Continued)

Plaintiffs have failed to satisfy this minimal pleading burden. For the reasons that follow, we agree.

1.

The district court held that "[i]f there are experts who support what [the Companies] say in their advertisements, the

---

elements: (1) a deceptive act or unfair practice; (2) causation; and (3) actual damages."); McKinney v. Bayer Corp., 744 F. Supp. 2d 733, 753 (N.D. Ohio 2010) ("To state a claim for breach of warranty under the [Ohio] UCC, a plaintiff must allege: (1) the existence of a warranty; (2) the product failed to perform as warranted; (3) the plaintiff provided the defendant with reasonable notice of the defect; and (4) the plaintiff suffered an injury as a result of the defect."); Engel v. Novex Biotech LLC, No. 14-cv-03457-MEJ, 2014 WL 5794608, at *2 (N.D. Cal. Nov. 6, 2014) ("In an action for false advertising under the [California] UCL and CLRA, the plaintiff bears the burden of proving the defendant's advertising claim is false or misleading." (internal quotation marks omitted)); De Bouse v. Bayer AG, 235 Ill. 2d 544, 550, (2009) ("A[n Illinois] Consumer Fraud Act claim requires (1) a deceptive act or practice by the defendant, (2) the defendant's intent that the plaintiff rely on the deception, (3) the occurrence of the deception in a course of conduct involving trade or commerce, and (4) actual damage to the plaintiff that is (5) a result of the deception."); Manahawkin Convalescent v. O'Neill, 217 N.J. 99, 122 (2014) ("An unlawful practice under the [New Jersey] CFA requires 'fraudulent, deceptive or other similar kind of selling or advertising practices.'" (quoting Daaleman v. Elizabethtown Gas Co., 77 N.J. 267, 271 (1978))); Koch v. Acker, Merrall & Condit Co., 18 N.Y.3d 940, 941 (2012) (per curiam) ("To successfully assert a claim under [New York] General Business Law § 349(h) or § 350, 'a plaintiff must allege that a defendant has engaged in (1) consumer-oriented conduct that is (2) materially misleading and that (3) plaintiff suffered injury as a result of the allegedly deceptive act or practice.'" (quoting City of N.Y. v. Smokes-Spirits.Com, Inc., 12 N.Y.3d 616, 621 (2009))).

advertisements are not false and misleading . . . ." J.A. 248. The district court clarified that Plaintiffs should not amend the CAC unless they can plead that "any reasonable expert would conclude from the cited studies that glucosamine and chondroitin do not improve joint health in non-arthritic consumers." J.A. 249. The district court's test—while incorrect in its specific formulation—accurately summarizes the law of false advertising.[7]

The federal Lanham Act creates a private right of action for corporate victims of "false or misleading" descriptions or representations. 15 U.S.C. § 1125(a). Although consumers (such as Plaintiffs) cannot invoke the protections of the Lanham Act, Lexmark Int'l, Inc. v. Static Control Components, Inc., 134 S. Ct. 1377, 1390 (2014), the considerable body of federal common law construing the Act is instructive in construing the state laws at issue here. Courts uniformly interpret "false or

[7] The district court's reference to the specific studies cited in the CAC is error. Under Twombly and Iqbal, "a plaintiff need not 'forecast' evidence sufficient to prove the elements of the claim." Walters v. McMahen, 684 F.3d 435, 439 (4th Cir. 2012) (quoting Robertson v. Sea Pines Real Estate Cos., 679 F.3d 278, 291 (4th Cir. 2012)). While the studies cited in the CAC are statements of fact that may collectively "raise a right to relief above the speculative level," Twombly, 550 U.S. at 555, they do not comprise the full body of evidence that the factfinder would ultimately consult to determine liability. As will be developed below, the question of falsity hinges on the existence (or not) of scientific consensus and not on the conclusions that hypothetical scientists might draw from those studies referenced in the CAC.

misleading" as creating two different theories of recovery in a false advertising claim: A plaintiff must allege either (i) that the challenged representation is literally false or (ii) that it is literally true but nevertheless misleading. See, e.g., Southland Sod Farms v. Stover Seed Co., 108 F.3d 1134, 1139 (9th Cir. 1997); BASF Corp. v. Old World Trading Co., 41 F.3d 1081, 1089 (7th Cir. 1994); Castrol Inc. v. Pennzoil Co., 987 F.2d 939, 943 (3d Cir. 1993); see also 44 Am. Jur. Proof of Facts 3d 1, § 8 (2015) (collecting cases). A Lanham Act plaintiff arguing that a representation is misleading must produce extrinsic evidence of actual consumer confusion—it is not enough for a court to determine after the fact that a representation could have misled hypothetical consumers. See Scotts Co. v. United Indus. Corp., 315 F.3d 264, 272–73 (4th Cir. 2002). However, a plaintiff arguing literal falsity need not produce such evidence. Id. If a representation is false, we assume as a matter of law that it is also misleading.

In construing the diverse state statutes at issue here, we apply this broadly shared understanding of the difference between false and misleading representations. Every statute at issue here imposes liability for misleading representations. Although each state supplies its own test for determining

whether true statements are misleading,[8] statements that are literally false are necessarily misleading within the meaning of all of the statutes. Crucially, Plaintiffs have consistently argued below and on appeal that the challenged representations are false and that the challenged products are ineffective. The CAC nowhere alleges, and Plaintiffs have at no time argued, that any of the representations are literally true but misleading.

Because Plaintiffs elected to plead that the Companies' representations are false rather than true but misleading, we must determine whether the CAC states facts showing that the representations are literally false. Plaintiffs' theory of the case is a syllogism: (i) the Companies represent that the products improve joint health; (ii) scientific evidence will show that glucosamine and chondroitin do not improve joint health more than a placebo would; (iii) therefore, the representations must be false because the products do not and cannot improve joint health. However, the CAC does not allege

[8] See, e.g., Oliveira v. Amoco Oil Co., 201 Ill.2d 134, 155 (2002) ("[A] plaintiff must allege that he was, in some manner, deceived."); Barry v. Arrow Pontiac, Inc., 100 N.J. 57, 69 (1985) (asking "whether the ad itself is misleading to the average consumer"); Guggenheimer v. Ginzburg, 43 N.Y.2d 268, 272-73 (1977) ("In weighing a statement's capacity, tendency or effect in deceiving or misleading customers, we do not look to the average customer but to the vast multitude which the statutes were enacted to safeguard including the ignorant, the unthinking and the credulous . . . .").

that all scientists agree that glucosamine and chondroitin are ineffective at providing the promised joint health benefits. Rather, it alleges that "the vast weight of competent clinical evidence," J.A. 33, and the "overwhelming weight of high quality, credible and reliable studies," J.A. 35, support this finding. Plaintiffs thereby concede that, although most duly qualified scientific experts may agree that glucosamine and chondroitin are ineffective, some reasonable experts disagree and believe that glucosamine and chondroitin can provide the symptom relief promised by the Companies. In other words, contrary to the second prong of Plaintiffs' own syllogism, the CAC alleges that the scientific evidence regarding the efficacy of glucosamine and chondroitin is equivocal. Plaintiffs have therefore failed to allege that the challenged representations are literally false.

Plaintiffs urge that it is inappropriate for the court to resolve a "battle of the experts" on the pleadings. However, we need not resolve any "battle of the experts" in order to decide whether the CAC states a claim for false advertising. When litigants concede that some reasonable and duly qualified scientific experts agree with a scientific proposition, they cannot also argue that the proposition is "literally false." Either the experts supporting the Companies are unreasonable and unqualified (in which case, there is no real battle of the

experts to begin with) or they reflect a reasonable difference of scientific opinion (in which case the challenged representations cannot be said to be literally false). By characterizing the dispute as a battle of the experts, Plaintiffs highlight the CAC's concession that a reasonable difference of scientific opinion exists as to whether glucosamine and chondroitin can provide the advertised joint health benefits.

Plaintiffs also object that our holding today would "permit a manufacturer of the most dubious product to engage an 'expert' and then contend it was immune from a consumer fraud action." Appellants' Br. at 18. However, plaintiffs who believe that no reasonable scientist would agree with the challenged representations remain free to make that allegation. Having done the due diligence required by Rule 11 of the Federal Rules of Civil Procedure, they need not fear that the defendant's subsequent production of a surprise expert whose opinion is not reflected in the published scientific literature would expose them to Rule 11 sanctions.[9] See Morris v. Wachovia Sec., Inc.,

[9] The label of TriFlex Fast-Acting references such a private study. Although Plaintiffs were free to allege that the study cannot have been conducted in a reasonable or reliable way (because all reasonable experts support the opposite conclusion), they failed to do so. We decline to speculate as to why, if the evidence is as clear and univocal as they claim, Plaintiffs exhibited such hesitation.

448 F.3d 268, 278 (4th Cir. 2006) (noting that Rule 11(b) is violated only when a party has no factual basis for an allegation in a signed pleading). Moreover, plaintiffs remain protected from dubious experts by the Federal Rules of Evidence, which "ensure that any and all scientific testimony . . . is not only relevant, but reliable." Cooper v. Smith & Nephew, Inc., 259 F.3d 194, 199 (4th Cir. 2001) (quoting Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 588 (1993)).

Our holding today should not be interpreted as insulating manufacturers of nutritional supplements from liability for consumer fraud. A manufacturer may not hold out the opinion of a minority of scientists as if it reflected broad scientific consensus. Nevertheless, we need not decide today whether any of the representations made on the Companies' products are misleading, because Plaintiffs chose not to include such allegations in the CAC.

In sum, we hold that in order to state a false advertising claim on a theory that representations have been proven to be false, plaintiffs must allege that all reasonable experts in the field agree that the representations are false. If plaintiffs cannot do so because the scientific evidence is equivocal, they have failed to plead that the representations based on this disputed scientific evidence are false.

2.

The CAC is also defective because it fails to allege that all of the ingredients contained in the products are incapable of providing the represented benefits. This defect presents an alternate ground for affirming the district court.

The CAC alleges that according to most scientists, glucosamine and chondroitin, MSM, and HA do not provide the benefits represented on the products' packaging. However, most of the products cited in the complaint contain additional ingredients. All of the GNC products allegedly purchased by the named plaintiffs contain ingredients not referenced in the CAC, including white willow bark extract, hops cones extract, Chinese skullcap root extract, and fish oil. All of the Rite Aid products allegedly purchased by named plaintiffs except for Rite Aid Natural Glucosamine/Chondroitin also contain additional ingredients. Plaintiffs conceded before the district court that the CAC does not "specifically address" what they refer to as the "minor ingredients" in the products.[10] J.A. 125.

[10] Despite this earlier concession, Plaintiffs represented to this Court that "[t]he CAC . . . alleges that all of the ingredients in Defendants' products have been proven . . . to be ineffective" and that "the cited studies . . . include all of the ingredients in Defendants' products." Appellants' Reply Br. (Continued)

Most of the challenged representations—including "supports improved joint health," "protects joints," "joint comfort," and "rebuilds cartilage"—refer to the products as a whole.[11] The products, except for Rite Aid Natural Glucosamine/Chondroitin, contain herbal compounds that ostensibly contribute to joint health and comfort. To the extent that Plaintiffs failed to allege that all of the purportedly active ingredients in each product are ineffective at promoting joint comfort, health, and flexibility, they have failed to adequately plead falsity of the representations regarding the products as a whole. See Toback v. GNC Holdings, Inc., No. 13-80526-CIV, 2013 WL 5206103, at *5 (S.D. Fla. Sept. 13, 2013) ("Plaintiff's allegations regarding the inefficacy of glucosamine and chondroitin simply fail to address the efficacy of the TriFlex Vitapak's multifarious

---

1, 8 (emphasis added). Plaintiffs' counsel is reminded "that a lawyer's duty of candor to the court must always prevail in any conflict with the duty of zealous advocacy." U.S. Dep't of Hous. & Urban Dev. v. Cost Control Mktg. & Sales Mgmt. of Va., Inc., 64 F.3d 920, 925 (4th Cir. 1995).

[11] GNC TriFlex Complete Vitapak represents on the side of the package and in small print that "[g]lucosamine and chondroitin help preserve joint function and rebuild cartilage." J.A. 189. GNC TriFlex Fast-Acting represents, in small print on the side of the package, that "[s]cientific research has shown that these building block compounds [i.e., glucosamine and chondroitin] help to support the body's natural ability to regenerate cartilage and lubricate joints thus supporting joint health integrity and function." J.A. 193.

composition in promoting joint health, and thus fail to raise Plaintiff's claim, that the Vitapak as a whole does not function as advertised, above the speculative level." (emphasis added)); McCrary v. Elations Co., LLC, No. EDCV 13-0242 JGB (OPx), 2013 WL 6402217, at *5 (C.D. Cal. Apr. 24, 2013) (dismissing claims regarding the overall formulation of a supplement when plaintiff provided no scientific studies regarding several of the purportedly active ingredients).

We therefore affirm the dismissal of all claims regarding the overall formulation of all products except for Rite Aid Natural Glucosamine/Chondroitin on the alternate ground that the CAC does not allege that the products' ingredients are ineffective as marketed.

3.

The Companies also argue that the studies cited in the CAC are not specific enough to raise any plausible inferences regarding the efficacy of the challenged products. We find this line of reasoning unpersuasive and inconsistent with notice pleading under Twombly and Iqbal.

First, the Companies argue that because the scientific studies cited in the CAC concerned patients with osteoarthritis, their findings are inapplicable to people without arthritis who experience joint pain and stiffness. Plaintiffs respond that we

must take as true the CAC's allegation that "experts in the field deem [clinical studies conducted on arthritic patients] to be appropriate proxies for whether the ingredients are effective . . . for both arthritic and non-arthritic users." J.A. 23 n.5. Plaintiffs further note that the symptoms of arthritis assessed in the studies—joint stiffness, pain, and discomfort—are precisely the symptoms that the products purport to remedy. For example, the CAC cites one study that concluded that "glucosamine and chondroitin, alone or in combination, did not reduce joint pain . . . compared with a placebo," and another that found that "glucosamine and chondroitin did not rebuild cartilage." J.A. 37–38. It may well be that glucosamine and chondroitin work differently in people with arthritis than in people without arthritis, but such a factual dispute is not susceptible to resolution at the motion-to-dismiss stage.

Second, the Companies argue that the scientific studies cited in the CAC are insufficient evidence of falsity because they did not assess the specific formulations used in the products or the synergistic effects between the products' ingredients. They argue that the studies are inapplicable because they considered different amounts and combinations of glucosamine and chondroitin. Again, however, our inquiry at this stage is limited to the plausibility of the CAC and not the ultimate truth of its allegations: The applicability of a study

regarding different dosages of the same ingredients to the products at issue is not susceptible to resolution at the motion-to-dismiss stage. See Quinn v. Walgreen Co., 958 F. Supp. 2d 533, 544 (S.D.N.Y. 2013); Pearson v. Target Corp., No. 11 CV 7972, 2012 WL 7761986, at *2 (N.D. Ill. Nov. 9, 2012) ("[W]hether or not the proffered studies are applicable to Up & Up Triple Strength is a question of fact that I do not decide at this stage. The fact that these studies looked at products that shared the same active ingredients-Glucosamine, Chondroitin, and MSM-makes Plaintiff's claim facially plausible."); see also Jovel v. i-Health, Inc., No. 12-CV-5614 (JG), 2013 WL 5437065, at *9 (E.D.N.Y. Sept. 27, 2013). We therefore decline to adopt these grounds for affirming the district court's order.

IV.

For the foregoing reasons, we hold that the CAC fails to state a claim upon which relief can be granted. The judgment of the district court is therefore

AFFIRMED.