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UNITED STATES DISTRICT COURT
 SOUTHERN DISTRICT OF NEW YORK

----- X
 CASSAVA SCIENCES, INC., :
 :
 Plaintiff, :
 -v- :
 DAVID BREDT, *et al.*, :
 Defendants. :
 ----- X

1:22-cv-9409-GHW

MEMORANDUM
OPINION & ORDER

GREGORY H. WOODS, United States District Judge:

I. INTRODUCTION

Cassava Sciences, Inc. (“Cassava”) is a biotechnology company that is conducting clinical trials for an Alzheimer’s drug called simufilam. Following the second phase of the simufilam clinical trials, multiple short sellers, most of them scientists, published concerns about the integrity of the clinical trials and other studies related to simufilam. They sent letters to the Food and Drug Administration (the “FDA”) that painstakingly analyzed published results, data, and methodology, published presentations aimed at investors that summarized the letters and analyzed Cassava’s public representations, and posted hundreds of tweets, which were, by their nature, much less rigorous.

Cassava vigorously disagreed with the concerns expressed by the short sellers. Members of the scientific community in Cassava’s position have a variety of options. They can publish a thorough, factually supported rebuttal. They can facilitate replication of their results by a neutral, unaffiliated lab. They can invite the scientists expressing concerns to review their unpublished underlying data. Here, Cassava is pursuing another approach: a lawsuit against the people who have critiqued its scientific findings.

Three groups of defendants moved to dismiss the complaint. Magistrate Judge Ona Wang issued three report and recommendations recommending dismissal of all of Plaintiff’s claims. Dkt. Nos. 104 (the “First R&R”), 105 (the “Second R&R”), 110 (the “Third R&R”). Because the Court

finds that the majority of the defendants' statements were protected under the First Amendment as statements of opinion or scientific debate, and that the fraction of statements that were adequately alleged to be defamatory were not published with actual malice, it dismisses Plaintiff's claims against all of the defendants.

II. BACKGROUND

A. Cassava

The Court refers to the First, Second, and Third R&Rs for a comprehensive description of the facts of the case but will summarize the facts and procedural history relevant to this opinion. Plaintiff is a publicly traded biotechnology company with two "biopharmaceutical assets" in development. Dkt. No. 30 ("Complaint") ¶¶ 2, 37. One is an Alzheimer's drug called simufilam, for which it is currently conducting clinical trials. *Id.* ¶ 2. Plaintiff claims that simufilam improves brain function by targeting a protein called filamin A. *Id.* ¶ 11. Plaintiff has been developing simufilam for "over a decade at a cost of over \$100,000,000." *Id.* ¶ 3. Some of Plaintiff's executives have made "material" investments in Plaintiff's stock. *Id.* ¶ 356. Plaintiff's other product is a diagnostic test called SavaDX, which Plaintiff claims can "detect the presence of Alzheimer's disease from a small sample of blood." *Id.* ¶ 37.

For the past decade, Plaintiff has conducted "basic research, in vitro studies, and preclinical studies" supporting the safety and efficacy of simufilam, and an "industry poster" about simufilam. *Id.* ¶¶ 64, 149. That research was published in academic journals, and at least some of it was submitted to the FDA to gain approval to conduct clinical trials. *Id.* ¶ 64.

Plaintiff gained FDA approval for phase 1 clinical trials for simufilam in 2017. *Id.* ¶ 64.¹ After completing the phase 1 trials, it proceeded with two independent phase 2 studies (the "Phase

¹ According to the Complaint, "[t]he primary purpose of [phase 1] clinical studies is to assess the metabolism, pharmacologic action, tolerability and safety of a drug candidate." *Id.* ¶ 56.

2a Study” and “Phase 2b Study”). Plaintiff completed its Phase 2a Study in 2019 and commenced its Phase 2b Study the following year. *Id.* ¶¶ 68, 71.²

In May 2020, Plaintiff announced that an “outside lab” unaffiliated with Plaintiff had conducted an analysis of its Phase 2b Study data and discovered “unnaturally high variability and other problems.” *Id.* ¶ 73. Plaintiff “concluded that the data from this initial bioanalysis was anomalous and highly improbable. . . . [and] served no useful purpose.” *Id.* It sent those data to another lab—which it does not allege was “outside” or unaffiliated with Plaintiff—for reanalysis. *Id.* Plaintiff announced the results of the reanalysis in late 2020. *Id.* ¶ 74. According to Plaintiff, the reanalysis showed, among other things, that simufilam improved brain function in Alzheimer’s patients. *Id.* In late 2021, Plaintiff progressed to the third stage of the clinical trials. *Id.* ¶ 74.³

In parallel with the clinical trials, Plaintiff also conducted a “long-term, open label” study (the “Open Label Study”), with the objectives of monitoring safety and tolerability of simufilam over time, in addition to monitoring changes in patients’ cognition and biomarkers associated with Alzheimer’s. *Id.* ¶ 97. It published multiple sets of results for the Open Label Study throughout 2021. *Id.* ¶¶ 98–104. According to Plaintiff, the results showed, among other things, that simufilam improved cognition in Alzheimer’s patients and was safe and well-tolerated. *Id.* ¶¶ 98–107.

B. Letters to the FDA

In August 2021, two neuroscientists named David Bredt and Geoffrey Pitt (the “Neuroscientist Defendants”) sent a letter and report (the “Citizen Petition”) to the FDA expressing “grave concerns about the quality and integrity of the laboratory-based studies” of simufilam,

² Phase 2 trials “involve studies in disease-affected patients to determine the proper dose required to produce the desired benefits. At the same time, safety and further pharmacokinetic and pharmacodynamic information is collected, possible adverse effects and safety risks are identified, and a preliminary evaluation of efficacy may be observed.” *Id.* ¶ 57.

³ Phase 3 trials “are designed to provide the data necessary to demonstrate the effectiveness of the product for its intended use, its safety in use, and to establish the overall benefit/risk relationship of the product and provide an adequate basis for product approval.” *Id.* ¶ 58.

including the Phase 2b study reanalysis. Dkt. No. 30-5 (“Pet.”) at 3.⁴ According to Plaintiff, the Neuroscientist Defendants sent the Citizen Petition after securing short positions in Plaintiff’s stock. Complaint ¶ 120. In the Citizen Petition, the Neuroscientist Defendants described “anomalies” in research published by Plaintiff, including its clinical trial results, as well as in research by Dr. Lindsay Burns and Dr. Hoau-Yan Wang, who they claimed to have authored many of the studies underlying Plaintiff’s claims about the link between filamin A and Alzheimer’s. Complaint ¶ 120; Pet. at 4.⁵ Over a nearly 40-page report, the Neuroscientist Defendants provided detailed critiques of the methodologies and figures included in those studies. *See* Pet. They asserted that the alleged anomalies suggested possible data manipulation and challenged the suitability of methodologies employed in the studies and the validity of the inferences the authors drew from the studies. *Id.* They concluded that the FDA should strongly consider halting Plaintiff’s clinical trials and “complet[ing] a rigorous audit” of Plaintiff’s research. Pet. at 5. Like all letters to FDA, the Citizen Petition was posted on a federal government webpage. Complaint ¶ 122. The Neuroscientist Defendants also authorized their lawyer to publish a press release hyperlinking to the letter. *Id.* ¶ 123.

In the following months, the Neuroscientist Defendants sent four supplemental letters and reports to the FDA expanding on their concerns and reasoning. Dkt. Nos. 30-6, 30-7, 30-11, 30-13 (together, with the Citizen Petition, the “Neuroscientist FDA Letters”). Those letters also contained critiques of the methodologies and figures included in published studies. *See* Dkt. Nos. 30-6, 30-7,

⁴ The Neuroscientist Defendants sent the letters anonymously through their attorney, Jordan Thomas. Mr. Thomas is not a party to this action.

⁵ Though the Complaint repeatedly accuses Defendants of making defamatory statements about Dr. Wang and Dr. Burns, it does not allege facts about either scientist’s affiliation with Cassava or the connection between their research and the development of simufilam. Cassava’s 2021 Form 10-k, which it attached to the Complaint as Exhibit 20, identifies Dr. Burns as Cassava’s Senior Vice President of Neuroscience. Dkt. No. 30-22 at 14. In the Citizen Petition, the Neuroscientist Defendants identified Dr. Burns as Plaintiff’s academic collaborator. Pet. at 4. The Court does not accept these facts as true for the purposes of this motion but includes them in this summary for context.

30-11, 30-13.⁶

Plaintiff responded to the Neuroscientist FDA Letters with a series of press releases defending the integrity and validity of the challenged research and denouncing the claims in the letters. *See, e.g.*, Dkt. No 35-3. Some of the subsequent Neuroscientist FDA Letters responded to the claims in Plaintiff's press releases and observed that since the publication of the Citizen Petition, other scientists had raised similar concerns about the research surrounding simufilam. *See, e.g.*, Dkt. No. 30-13 at 2, 10. The letters also included hyperlinks to some of those critiques. *See, e.g.*, Dkt. No. 30-11 at 4.

In October 2021, another group of scientists, Adrian Heilbut, Jesse Brodtkin, Enea Milioris, and Patrick Markey⁷ (together, the "Dot Com Defendants") registered the domain names cassavafraud.com and simuflimflam.com. Complaint ¶¶ 131–132. According to Plaintiff, the Dot Com Defendants also held short positions in Plaintiff's stock. *Id.* ¶ 132. Shortly after registering the domain names, the Dot Com Defendants sent their own letter to the FDA (the "Dot Com FDA Letter") (together, with the Neuroscientist FDA Letters, the "FDA Letters"). *Id.* ¶ 133; Dkt. No. 30-8. The Dot Com FDA Letter raised the same "grave concerns" as the Neuroscientist FDA Letters. *See* Dot Com FDA Letter at 1. Like the Neuroscientist FDA Letters, the Dot Com FDA Letter contained detailed analysis of published data, results, methodology, and figures in studies by Plaintiff, Dr. Wang, and Dr. Burns, and thoroughly described the reasoning for the scientists' concerns. *See* Dot Com FDA Letter. It also posed dozens of questions to Plaintiff arising from that analysis. *See id.* The Dot Com Defendants posted the letter to cassavafraud.com and simuflimflam.com. Complaint ¶¶ 133, 135.

⁶ Readers should refer to the First and Second R&Rs for a thorough description of the contents of the FDA Letters.

⁷ As Judge Wang noted in the Second R&R, it does not appear that Dr. Markey ever responded to Plaintiff's amended complaint or entered a notice of appearance. Nonetheless, the other Dot Com Defendants' arguments apply equally to Dr. Markey, because Plaintiff alleges that he engaged in the same conduct. *See* Second R&R at 1 n. 3.

According to Plaintiff, the FDA Letters triggered scientific journals that had published the challenged research to conduct “independent investigations” of those studies. Complaint ¶ 371. Plaintiff alleges that “[e]ach journal, of course, concluded there was no evidence (or no compelling evidence) of the manipulation that Defendants claimed occurred.” *Id.* Plaintiff also alleges that other scientists disagreed with the FDA Letters in tweets and blog posts. Complaint ¶¶ 362–364.

C. Slide Decks

Days after publishing the Dot Com FDA Letter, the Dot Com Defendants posted a slide deck to their websites called “Cassava Sciences: A Shambolic Charade.” *Id.* ¶ 136; Dkt. No. 30-9 (the “Shambolic Charade Deck”). Drawing on publicly available information and analyses, including the FDA Letters, analyses on a website called PubPeer,⁸ news articles, and Plaintiff’s public statements, the slide deck accused Plaintiff of data manipulation and fabrication with respect to simufilam and SavaDX and called on the FDA to halt the simufilam clinical trials. *See* Shambolic Charade Deck. Like the Dot Com FDA Letter, the Shambolic Charade Deck is replete with screenshots of and hyperlinks to its sources. *See id.*

Less than a month later, the Dot Com Defendants published another slide deck to their websites called “SavaDX Exposed.” Complaint ¶ 149; Dkt. No. 30-12 (the “SavaDX Deck”). Like the Shambolic Charade Deck, this presentation drew on publicly available information, including emails that the Dot Com Defendants obtained through the Freedom of Information Act (“FOIA”) and published online. *See* SavaDx Deck. It contained speculation about the mechanism by which SavaDX purported to diagnose Alzheimer’s and expressed doubts about the test’s accuracy. *See id.* Also like the previous deck, the SavaDX deck included many screenshots and hyperlinks to its sources. *See id.*

⁸ Plaintiff does not allege any facts about PubPeer. The Court takes judicial notice that PubPeer is an online platform that allows users to critique published scientific research. *See* <https://perma.cc/UEF4-FXBW>.

Finally, weeks after publishing the SavaDX deck, the Dot Com Defendants published the final slide deck on their websites, called “Cassava and the Wang Lab: Seeing through the Blind.” Complaint ¶ 156; Dkt. No. 30-14 (the “Seeing through the Blind Deck”). This presentation had the same basic structure as the previous two, but focused on attacking Plaintiff’s claims that its Open Label Study and Phase 2b Study were double-blind. *See* Seeing through the Blind Deck.

D. QCM Report and Interview

Shortly after the Dot Com Defendants published their first slide deck, a hedge fund called Quintessential Capital Management, LLC (“QCM”) published a report about Plaintiff. Complaint ¶ 16–17; Dkt. No. 30-10 (the “QCM Report”). Like the other defendants, QCM held a short position in Plaintiff’s stock. Complaint ¶ 16. According to Plaintiff, QCM “publishes reports as part of its efforts to influence and/or manipulate the trading price for its investments.” *Id.*

The QCM Report contained disclaimers typical of many investment analysts, such as a disclosure that QCM held a short position in Plaintiff’s stock and that the report represented QCM’s opinions. *See* QCM Report. It began by describing QCM’s investigation of Plaintiff. QCM represented that among other things, it had consulted with scientists, reviewed publicly available information, interviewed Plaintiff’s former employees, and conducted surveillance of Plaintiff’s research facilities. *See* QCM Report at 7–8. The report described accusations of misconduct against individuals involved in Plaintiff’s business and scientific operations, including criminal convictions and fraud lawsuits, and analyzed the compensation structure for Plaintiff’s executives. *See id.* at 7. It theorized that perverse incentives and untrustworthy actors made Plaintiff’s claims about simufilam suspect. *Id.* at 8. Next, the report critiqued published simufilam research, describing alleged “red flags” and speculating about data manipulation. *Id.* at 22–29.

The QCM report then critiqued Plaintiff’s clinical trial protocols based on publicly available documents and undercover surveillance of Plaintiff’s research sites. *Id.* at 31. The report speculated

that anomalous design and lack of certain safeguards might make the results of Plaintiff's clinical trials and Open Label study unreliable. *Id.* at 31–36. The report also hyperlinked to the Citizen Petition, analysis by a consulting scientist named Elizabeth Bik that was critical of Plaintiff's research, and a full report by the consultant who critiqued Plaintiff's clinical trial protocol. *See* QCM Report.

The following year, QCM's Managing Partner Gabriel Grego discussed the QCM Report in an interview about QCM's activist investing activities. *See* Dkt. No. 30-16 (“Grego Interview”). In the interview, he encouraged readers to review the full QCM Report. *Id.*

E. Tweets

Concurrently with the letters, slide decks, and report, QCM and the Dot Com Defendants posted frequent tweets about Plaintiff on the platform X (formerly known as Twitter). The tweets expressed many of the same sentiments that appear in the other publications. Plaintiff compiled nearly one thousand of those tweets in an appendix to the Complaint but alleges little about the context in which they were published, such as whether they were posted in response to other tweets, which tweets appeared alongside them on the author's X profiles, or any other information about the X profiles on which they appeared. *See* Dkt. No. 30-2, Appendix A. The only contextual information Plaintiff provides is the author and the date on which the tweet was posted. *Id.* The first of the tweets are dated November 2021, and the most recent are dated late 2022. *Id.*

F. Procedural History

In 2022, Plaintiff brought defamation claims against all of the defendants. *See* Dkt. No. 1. Plaintiff claimed that Defendants conspired to defame Plaintiff for profit. Complaint ¶ 282. Plaintiff challenged hundreds of statements in the FDA Letters, Slide Deck, QCM Report, Grego Interview and hundreds of tweets by the defendants, many of which themselves consist of multiple statements. Plaintiff asserted that the challenged statements amounted to false accusations that

Plaintiff engaged in fraud and that simufilam is not effective.

Each of the three sets of defendants filed motions to dismiss arguing, among other things, that the challenged statements constituted opinions or scientific debate protected by the First Amendment, and that none of the statements had been published with actual malice. Dkt. Nos. 74, 77, 86. Plaintiff filed oppositions to all three motions. Dkt. Nos. 80 (“First Opposition”), 88 (“Second Opposition”), and 95 (“Third Opposition”). All three sets of defendants replied. Dkt. Nos. 81, 92, 96.

On January 3, 2024, Magistrate Judge Ona Wang issued an R&R recommending dismissal of Plaintiff’s claims against the Neuroscientist Defendants. The R&R concluded, among other things, that the Neuroscientist Defendants’ statements were non-actionable under the standard set forth in *ONY, Inc. v. Cornerstone Therapeutics, Inc.*, 720 F.3d 490 (2d Cir. 2013). First R&R at 17–19.

Judge Wang issued another R&R on January 5, 2024 recommending dismissal of Plaintiff’s claims against the Dot Com Defendants, primarily because she concluded their statements were either non-actionable under *ONY* or non-actionable opinions. *See* Second R&R at 8–11. Finally, Judge Wang issued an R&R on January 23, 2024 recommending dismissal of Plaintiff’s claims against QCM, concluding that the challenged statements were opinions. *See* Third R&R at 10–14. Plaintiff filed timely objections to all three R&Rs, arguing that *ONY* was inapplicable to any of the challenged statements and that the R&Rs applied incorrect legal standards in several other respects. Dkt. Nos. 108 (“First Objections”), 109 (“Second Objections”), 115 (“Third Objections”). Each set of Defendants timely responded. Dkt. Nos. 112, 113, 116.

III. LEGAL STANDARD

A. Report and Recommendation

A district court reviewing a magistrate judge’s report and recommendation on a dispositive motion “may accept, reject, or modify, in whole or in part, the findings or recommendations made

by the magistrate judge.” 28 U.S.C. § 636(b)(1). Parties may raise specific, written objections to the report and recommendation within fourteen days of receiving a copy of the report. *Id.*; *see also* Fed. R. Civ. P. 72(b)(2). When a party timely objects to a magistrate’s report and recommendation, a district court reviews, *de novo*, “those portions of the report or specified proposed findings or recommendations to which objection is made.” 28 U.S.C. § 636(b)(1)(C). But where “the party makes only frivolous, conclusory or general objections, or simply reiterates her original arguments, the Court reviews the report and recommendation only for clear error.” *Chen v. New Trend Apparel, Inc.*, 8 F. Supp. 3d 406, 416 (S.D.N.Y. 2014) (quoting *Silva v. Peninsula Hotel*, 509 F. Supp. 2d 364, 366 (S.D.N.Y. 2007)). “Further, the objections ‘must be specific and clearly aimed at particular findings in the magistrate judge’s proposal.’” *McDonaugh v. Astrue*, 672 F. Supp. 2d 542, 547 (S.D.N.Y. 2009) (quoting *Molefe v. KLM Royal Dutch Airlines*, 602 F. Supp. 2d 485, 487 (S.D.N.Y. 2009)). The Court also reviews for clear error those parts of the report and recommendation to which no party has timely objected. 28 U.S.C. § 636(b)(1)(A); *Lewis v. Zon*, 573 F. Supp. 2d 804, 811 (S.D.N.Y. 2008).

B. Rule 12(b)(6)

Under F.R.C.P. Rule 12(b)(6), the Court must accept all factual allegations in the complaint as true and draw all reasonable inferences in the plaintiff’s favor. *DiFolco v. MSNBC Cable LLC*, 622 F.3d 104, 110–11 (2d Cir. 2010). To avoid dismissal, a complaint must contain “sufficient factual matter, accepted as true, to ‘state a claim to relief that is plausible on its face.’” *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). A formulaic recitation of the elements of a cause of action, devoid of supporting facts, does not suffice. *Id.* To satisfy the “plausibility” requirement, the plaintiff must plead facts that permit the court “to draw the reasonable inference that the defendant is liable for the misconduct alleged.” *Id.* (citing *Twombly*, 550 U.S. at 556).

Determining whether a complaint states a plausible claim is a “context-specific task that

requires the reviewing court to draw on its judicial experience and common sense.” *Id.* at 679. The court must accept all facts alleged in the complaint as true and draw all reasonable inferences in the plaintiff’s favor. *Burch v. Pioneer Credit Recovery, Inc.*, 551 F.3d 122, 124 (2d Cir. 2008) (per curiam).

However,

“[t]hreadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice.” A complaint must therefore contain more than “naked assertion[s] devoid of further factual enhancement.” Pleadings that contain “no more than conclusions . . . are not entitled to the assumption of truth” otherwise applicable to complaints in the context of motions to dismiss.

DeJesus v. HF Mgmt. Servs., LLC, 726 F.3d 85, 87–88 (2d Cir. 2013) (alterations in original) (quoting *Iqbal*, 556 U.S. at 678–79). Thus, a complaint that offers “labels and conclusions” or “naked assertion[s]” without “further factual enhancement” will not survive a motion to dismiss. *Iqbal*, 556 U.S. at 678 (citing *Twombly*, 550 U.S. at 555, 557).

On a motion to dismiss, a court must generally “limit itself to the facts stated in the complaint.” *Field Day, LLC v. Cnty. of Suffolk*, 463 F.3d 167, 192 (2d Cir. 2006) (quoting *Hayden v. Cnty. of Nassau*, 180 F.3d 42, 54 (2d Cir. 1999)). A court may also consider “documents attached to the complaint as exhibits, . . . documents incorporated by reference in the complaint . . . [and] document[s] integral to the complaint.” *DiFolco*, 622 F.3d at 111 (internal quotation marks and citation omitted). A court may consider these documents “not to prove the truth of their contents but only to determine what the documents stated.” *Glob. Network Commc’ns, Inc. v. City of New York*, 458 F.3d 150, 157 (2d Cir. 2006) (quoting *Kramer v. Time Warner Inc.*, 937 F.2d 767, 774 (2d Cir. 1991)). In the Rule 12(b)(6) context, “[a] court’s task is to assess the legal feasibility of the complaint; it is not to assess the weight of the evidence that might be offered on either side.” *Lynch v. City of New York*, 952 F.3d 67, 75 (2d Cir. 2020). “The purpose of Rule 12(b)(6) is to test, in a streamlined fashion, the formal sufficiency of the plaintiff’s statement of a claim for relief without resolving a contest regarding its substantive merits. The Rule thus assesses the legal feasibility of the

complaint but does not weigh the evidence that might be offered to support it.” *Glob. Network Commc’ns*, 458 F.3d at 155.

C. Defamation

“In New York, [d]efamation is the making of a false statement which tends to expose the plaintiff to public contempt, ridicule, aversion or disgrace, or induce an evil opinion of him in the minds of right-thinking persons, and to deprive him of their friendly intercourse in society.” *Elias v. Rolling Stone LLC*, 872 F.3d 97, 104 (2d Cir. 2017) (quoting *Stepanov v. Dow Jones & Co.*, 987 N.Y.S.2d 37, 41 (1st Dep’t 2014)). “To state a claim for defamation, a complaint must allege ‘(1) a false statement that is (2) published to a third party (3) without privilege or authorization, and that (4) causes harm, unless the statement is one of the types of publications actionable regardless of harm.’” *Id.* (citing *Stepanov*, 987 N.Y.S.2d at 41–42). “In addition . . . a defamation plaintiff must allege that the purportedly defamatory statement was ‘of and concerning’ him or her, i.e., that [t]he reading public acquainted with the parties and the subject’ would recognize the plaintiff as a person to whom the statement refers.” *Id.* at 104–105 (quoting *Carlucci v. Poughkeepsie Newspapers, Inc.*, 57 N.Y.2d 883, 885 (1982)). When a defamation claim is brought by a public figure, the First Amendment independently requires a showing that the defendant acted with “actual malice.” *N.Y. Times Co. v. Sullivan*, 376 U.S. 254, 279–280 (1964).

At the motion to dismiss stage, the court “must decide whether the statements, considered in the context of the entire publication, are reasonably susceptible of a defamatory connotation, such that the issue is worthy of submission to a jury.” *Stepanov*, 987 N.Y.S.2d at 42 (quotations omitted). That determination is “guided not only by the meaning of the words as they would be commonly understood . . . but by the words considered in the context of their publication.” *Levin v. McPhee*, 119 F.3d 189, 195 (2d Cir. 1997) (citing *Armstrong v. Simon & Schuster, Inc.*, 85 N.Y.2d 373, 381 (1995)). Allegedly defamatory statements must not “be read in isolation, but must be perused as the

average reader would against the ‘whole apparent scope and intent’ of the writing.” *Celle v. Filipino Rep. Enters. Inc.*, 209 F.3d 163, 177 (2d Cir. 2000) (quoting *November v. Time Inc.*, 13 N.Y.2d 175, 178 (1963)). A court may not “strain” to interpret statements in their most mild or defamatory sense. *Lan Sang v. Ming Hai*, 951 F. Supp. 2d 504, 518 (S.D.N.Y. 2013) (quoting *November*, 13 N.Y.2d at 178). Where the challenged statements are “susceptible of multiple meanings, some of which are not defamatory,” the court may not conclude, as a matter of law, that the statements are or are not defamatory. *Celle*, 209 F.3d at 178 (citing *Davis v. Ross*, 754 F.2d 80, 83 (2d Cir. 1985)).

Statements of opinion are not actionable as defamation, “however unreasonable the opinion or vituperous the expression of it may be.” *Davis*, 754 F.2d at 85 (quoting *Hotchner v. Castillo-Puche*, 551 F.2d 910, 913 (2d Cir. 1977)). Whether a challenged statement is an opinion is a question of law. *See id.* The New York Court of Appeals has identified three factors to provide guidance as to whether a statement is fact or opinion:

- (1) whether the specific language in issue has a precise meaning which is readily understood;
- (2) whether the statements are capable of being proven true or false; and
- (3) whether either the full context of the communication in which the statement appears or the broader social context and surrounding circumstances are such as to signal readers or listeners that what is being read or heard is likely to be opinion, not fact.

Gross v. N.Y. Times Co., 82 N.Y.2d 146, 153 (1993) (alteration omitted) (citations and quotations omitted). “The dispositive inquiry, under either Federal or New York law, is whether a reasonable reader could have concluded that [the statements] were conveying facts about the plaintiff.” *Id.* at 152 (alterations and quotations omitted); *see also Flamm v. Am. Ass’n of Univ. Women*, 201 F.3d 144, 153 (2d Cir. 2000) (noting that the inquiry “should not consist of a mechanical enumeration of each factor”).

A determination that a statement is an opinion “does not necessarily end of the analysis: if a statement is found to contain opinion, the court must next determine whether the statement is ‘pure opinion’ (and thus non-actionable) or ‘mixed opinion’ (and therefore actionable).” *Chau v. Lewis*,

771 F.3d 118, 129 (2d Cir. 2014). “Pure opinion is a ‘statement of opinion which is accompanied by a recitation of the facts upon which it is based’ or does not imply that it is based on undisclosed facts.” *Id.* (quoting *Steinbilber v. Alphonse*, 68 N.Y.2d 283, 289–290 (1986)). “Mixed opinion, on the other hand, is an opinion that *does* imply a basis in undisclosed facts, or facts known only to the author, and is actionable.” *Id.* (emphasis in the original). In addition, “opinions based on false facts are actionable against a defendant who had knowledge of the falsity or probable falsity of the underlying facts.” *Restis v. Am. Coal. Against Nuclear Iran, Inc.*, 53 F. Supp. 3d 705, 719 (S.D.N.Y. 2014) (citing *Davis*, 754 F.2d at 86).

IV. DISCUSSION

Plaintiff objected to Judge Wang’s conclusions that none of the alleged defamatory statements were actionable, that Plaintiff failed to adequately plead actual malice, and that Plaintiff failed to adequately plead special damages. Because Plaintiff’s objections are “specific and clearly aimed at particular findings in the magistrate judge’s proposal,” the Court reviews all of those conclusions *de novo*. *McDonough*, 672 F. Supp. 2d at 547 (quotations omitted). On *de novo* review, the Court finds that Plaintiff has not adequately pleaded a claim for defamation against any of the defendants.

A. FDA Letters

Defendants challenge approximately two hundred statements that the Neuroscientist and Dot Com Defendants made in the FDA Letters. The Court has analyzed each of these statements individually and has determined that none of them are actionable. While the Court has analyzed each statement individually, it addresses them in this opinion using the following categories: (1) scientific conclusions, (2) opinion statements, (3) unchallenged factual statements, and (4)

summaries and headings.⁹ The Court addresses each category in turn.¹⁰

i. Scientific Conclusions

First, the Court finds most of the challenged statements are scientific conclusions that purport to be based on the data and analysis presented in the FDA Letters.¹¹ Therefore, the Court analyzes those statements under the framework articulated by the Second Circuit in *ONY, Inc. v. Cornerstone Therapeutics, Inc.*, 720 F.3d 490 (2d Cir. 2013). In *ONY*, the Second Circuit acknowledged that “[s]cientific academic discourse poses several problems for the fact-opinion paradigm of First Amendment jurisprudence.” 720 F.3d at 496. While the “very premise of the scientific enterprise” is that it “engages with empirically verifiable facts about the universe,” it is also “the essence of the scientific method that the conclusions of empirical research are tentative and subject to revision, because they represent inferences about the nature of reality based on the results of experimentation and observation.” *Id.* Where “a statement is made as part of an ongoing scientific discourse about which there is considerable disagreement, the traditional dividing line between fact and opinion is not entirely helpful.” *Id.* at 497. Therefore, where a “speaker or author draws conclusions from

⁹ Plaintiff argues that the Court is required to perform a “statement-by-statement analysis” to evaluate Plaintiff’s defamation claims. First Objections at 12. Plaintiff has challenged more than one thousand statements in this case—some of which are in fact multiple statements, containing several sentences and communicating more than one message—and has made no attempt to brief each statement individually. Plaintiff instead groups the statements into broad, thematic categories that fail to take into account crucial factors such as the context in which the statements appeared. Moreover, with respect to many of these statements, including hundreds of tweets that do not reference Cassava in any manner, Plaintiff has not raised even a colorable defamation claim. While the Court has analyzed each statement individually, it does not perform statement-by-statement analysis in this opinion. Because Plaintiff identifies more than one thousand statements as actionable, the Court demonstrates its analysis using representative example statements.

¹⁰ Some of the statements Plaintiff challenges contain multiple statements and therefore fall into multiple categories.

¹¹ Other examples in the FDA Letters include: “There are two red flags with these reported data. First, the observed mean ADAS-Cog 11 scores after 6 and 9 months are virtually the same (13.9 vs. 13.6, respectively), so the data do not appear to demonstrate a continued improvement. Second, the baseline data between the 6-month and 9-month analyses changes substantially, and to a degree that seems inconsistent with other information provided by the company, suggesting possible manipulation”; “Figure 11a: The five leftmost tau bans appear to be identical to each other, AND the 3 rightmost tau bands appear to be identical to each other. These degrees of similarity are unlikely to occur by chance”; “When compared to the reported baseline standard deviation of 7.7 points and the observed improvement of 3 points, a difference of 13.75 points between dropped-out and newly included patients is suspiciously large. Whereas in Ph2b Cassava was able to obscure the effect of [s]imufilam through imaginative use of outlier exclusion criteria, in the Open Label Study they appear to have swapped subjects from 6 to 9 months in order to include those with extremely high ADAS-Cog scores.” Complaint ¶¶ 179, 239.

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,” those statements are not actionable. *Id.*

Most of the challenged statements in the FDA Letters fall squarely within this framework. In the FDA Letters, Defendants state the scientific conclusions that Plaintiff’s, Dr. Wang’s, and Dr. Burns’ results and methodologies display certain anomalies.¹² They then conclude that as a result of those alleged anomalies, Plaintiff’s claims about simufilam may be unreliable.¹³ The “non-fraudulent data” that Defendants analyzed to arrive at these conclusions were published data, figures, methodologies, and results. *Id.* The “accurate descriptions of the data and methodology underlying those conclusions” are laid out in the letters to the FDA. *Id.* Defendants’ methodology includes, among other things, visual comparisons of Western blots and critiques of methods used in foundational simufilam studies. And finally, there is “legitimate scientific disagreement” about whether simufilam data or research methodologies are anomalous and whether the alleged anomalies make Plaintiff’s claims about simufilam unreliable. *Id.* That scientific disagreement is demonstrated by Plaintiff’s allegations that “multiple science editors conducted independent investigations into journal articles they had published about Cassava’s foundational science and testing of simufilam” in response to the FDA Letters. Complaint ¶ 371.

Plaintiff argues that this conclusion “improperly expands” the holding of *ONY* to “create new law.” First Objections at 17. To the contrary, as described above, the Neuroscientists Defendants’ statements are clearly within the *ONY*’s bounds. Plaintiff seeks to distinguish

¹² For instance, the Dot Com Defendants concluded, based on their biomarker analysis, that “[t]he above adds to an extended series of implausible and entirely unrealistic values reported for nearly every CSF biomarker analyzed by Cassava Sciences.” Complaint ¶ 215.

¹³ For instance, the Neuroscientist Defendants concluded, after outlining their concerns of data manipulation, that “[t]his seemingly irrefutable data manipulation is important both because it implies a pattern of reckless scientific misconduct and because it undercuts foundational science related to simufilam mechanism of action in Alzheimer’s disease.” Complaint ¶ 179.

Defendants’ statements from the type of statements contemplated by *ONY* on two grounds. First, Plaintiff complains that unlike the defendants in *ONY*, Defendants published their statements in anonymous whistleblower letters to the FDA instead of in peer-reviewed journals. But *ONY*’s holding is not limited to scientific debate presented in peer-reviewed publications. Rather, *ONY* concerned statements made in “[s]cientific academic discourse” and observed that much of that discourse takes place in peer-reviewed journals. *ONY, Inc.*, 720 F.3d at 496–497. While Defendants did not publish their scientific conclusions in peer-reviewed journals, their statements were “contested and contestable scientific hypotheses” made in communications directed to the “relevant scientific community.” *Id.* This is demonstrated by Plaintiff’s allegation that as a result of the FDA Letters, other members of the scientific community, including Plaintiff, “respond[ed] 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.” *Id.* at 497. This is exactly the type of “ongoing discourse” in scientific communities in which courts should avoid interfering. *Id.*¹⁴

Second, Plaintiff argues that unlike the statements at issue in *ONY*, Defendants’ statements were not “inferences about the scientific conclusions to be drawn from the analysis of experimental data” but rather statements that “impugn the motives and integrity of Cassava and accuse it of intentional wrongdoing.” First Objections at 19. But as described, many of Defendants’ statements

¹⁴ Defendants cite three cases in which courts in this circuit and others rejected *ONY*’s application: *Eastman Chem. Co. v. Plastipure, Inc.*, 775 F.3d 230, 235 (5th Cir. 2014), *Mimedx Grp., Inc. v. Osiris Therapeutics, Inc.*, No. 16 CIV. 3645 (KPF), 2017 WL 3129799, at *2 (S.D.N.Y. July 21, 2017), and *Sobys Med., LLC v. Organogenesis, Inc.*, No. 4:18cv30, 2018 WL 10579659, at *5 (E.D. Va. Dec. 12, 2018). But all of them are distinguishable. The defendants in those cases repurposed scientific conclusions—originally published in other, protected mediums—as commercial speech directed at consumers. Those courts declined to apply *ONY* in those contexts not simply because the challenged speech did not appear in a peer-reviewed journal but because, as the court in *Eastman Chem. Co.* stated, the speech was made in an advertisement, directed at consumers, and “made without the necessary context presented by a full scientific study. . . . Advertisements do not become immune from Lanham Act scrutiny simply because their claims are open to scientific or public debate.” 775 F.3d at 236. Here, the FDA Letters were not advertisements. They did not repurpose conclusions from scientific analyses to sell products. Rather, the FDA Letters themselves contained robust scientific analysis, presented alongside the context required by *ONY*. In addition, they were directed at, and received a response from, the FDA and other members of the scientific community.

in the FDA Letters are precisely “inferences about the scientific conclusions to be drawn from the analysis of experimental data,” namely inferences about potential data manipulation or errors in studies surrounding simufilam, based on those studies’ published data, figures, and methodologies.

Id. Whether Plaintiff disagrees with Defendants’ inferences, or whether they might reflect unfavorably on Plaintiff, does not determine whether they qualify as scientific inferences under *ONY*. *Cf. Joseph v. Springer Nature*, No. 20 CIV. 4672 (JPC), 2021 WL 1372952, at *7 (S.D.N.Y. Apr. 12, 2021) (noting that scientific journal’s critiques of an analysis as “superficial and flawed” were not actionable under *ONY*), *aff’d sub nom. Joseph v. Springer Nature Am. Inc.*, No. 21-959-CV, 2021 WL 6105369 (2d Cir. Dec. 21, 2021) (summary order).

Plaintiff also argues that even if the Court characterizes the statements in the FDA Letters as inferences, “Cassava alleges that the statements made by [the defendants] were *not* reasonable inferences from the facts and data presented by Cassava.” First Objections at 15 (emphasis in the original). But the Court need not find that Defendants’ statements were “reasonable” scientific conclusions in order to conclude that they are not actionable. The Second Circuit opined in *ONY* that courts are “ill-equipped to undertake such controversies” as the “validity” of scientific inferences. *ONY, Inc.*, 720 F.3d at 497. Caselaw on non-scientific opinions, which Plaintiff urges the Court to apply to the statements in the FDA Letters, also does not include any such “reasonableness” requirement. In fact, “expression of pure opinion is not actionable . . . , no matter how vituperative or unreasonable it may be.” *Steinbilber*, 68 N.Y.2d at 289.¹⁵

Finally, Plaintiff argues that an application of *ONY* to the FDA Letters sets a dangerous precedent of “*carte blanche* immunity for publishers who attack others engaged in scientific endeavor.” First Objections at 18. But it is at least arguable that Plaintiff’s contention that the

¹⁵ As discussed below, the Court also finds that Plaintiff has failed to adequately plead that Defendants’ accusations were “inherently improbable.”

Court should find these scientific inferences actionable is dangerous. Plaintiff urges the Court to apply a pleading standard that would allow any drug developer to state a claim for defamation against any scientist who raised concerns about the integrity of a drug developer's research. A drug developer would be able to do so no matter how thorough and earnest the reasoning expressed by the scientist for her concerns, so long as the drug developer alleged that those concerns were unfounded and presented competing analyses in support of that claim. Such a result risks stifling scientific debate and undermining the vital role of whistleblowers in scientific discourse in both the academy and industry. *ONY* recognized the importance of permitting scientific debate in which “the scientific public sits as jury” rather than chilling it with litigation. *ONY, Inc.*, 720 F.3d at 497. As *ONY* warned, “courts are ill-equipped to undertake to referee” such controversies. *Id.* The Court will not attempt to do so here.

ii. Other Opinion Statements

Applying the *Gross* framework, the Court finds that several of the remaining challenged statements in the FDA Letters—the Neuroscientist FDA Letters specifically—qualify as opinions, albeit not scientific opinions.¹⁶ For instance, the Court uses that framework to assess the statement that “[o]n September 3, 2021, Remi Barbier, Cassava’s CEO, claimed in a public statement ‘we don’t have the original films or images for the Western blots in question. Those were generated by our science collaborator at CUNY, who is Prof. Wang.’ However, this representation is highly doubtful.” Complaint ¶ 231.

Applying the *Gross* factors, the Court finds that any “reasonable reader” would have understood this statement to be conveying an opinion. *Gross*, 82 N.Y.2d at 152. (noting that this is

¹⁶ Other examples of opinion statements in the Neuroscientist FDA Letters include: “It is worth noting that Cassava’s publication of these suspicious Phase 2a biomarker data occurred in a paper (JPAD 2020 4:256) that was accepted just 6 days after submission, which calls into question the credibility and rigor of that journal’s peer review process”; “Suddenly pausing SavaDx is another major red flag, as Cassava has described it has fast and inexpensive.” Complaint ¶¶ 231, 252.

the “dispositive inquiry” under New York law). New York Courts have found that qualifying language—here, “highly doubtful”—cuts against a finding that a statement is “capable of being proven true or false.” *Id.* at 153; *see, e.g., Small Bus. Bodyguard Inc. v. House of Moxie, Inc.*, 230 F. Supp. 3d 290, 312 (S.D.N.Y. 2017) (finding that “[t]here is no way to verify the truth of [the defendant’s] statement that ‘many people’ ‘might’” view certain actions as fraud); *Schmitt v. Artforum Int’l Magazine, Inc.*, 115 N.Y.S.3d 291, 301 (1st Dep’t 2019) (finding that “hedged phrasing also does not present falsifiable statements of fact”); *Bellavia Blatt & Crossett, P.C. v. Kel & Partners LLC*, 151 F. Supp. 3d 287, 293 (E.D.N.Y. 2015) (noting that qualifier words “signal presumptions and predictions rather than facts”) (collecting cases), *aff’d*, 670 F. App’x 731 (2d Cir. 2016) (summary order).¹⁷

The statement’s context also indicates that it is an opinion. *Gross*, 82 N.Y.2d at 153. It appears in a report prefaced by a cover letter characterizing the report as expressing “concerns” rather than stating facts. Dkt. No. 30-7 at 3. It also calls on the FDA not to halt the clinical trials permanently, but to launch an investigation to determine whether the concerns raised in the report are founded. *Id.* at 8. The later FDA letters also respond to specific statements in Plaintiff’s press releases. *See Silvercorp Metals Inc. v. Anthion Management LLC*, No. 150374/2011, 959 N.Y.S.2d 92, 2012 WL 3569952, at *2 (N.Y. Sup Ct, Aug. 16, 2012) (finding that “the point-counterpoint nature” of the defendant’s publication, which responded to the plaintiff’s press release “is characteristic of opinionated debate”). Particularly coupled with the statement’s qualifying language—in addition to qualifying and conditional language throughout the document—that context means that “a reasonable reader would understand the statement[] defendant made about plaintiff as mere allegations to be investigated rather than as facts.” *Brian v. Richardson*, 87 N.Y.2d 46, 53 (1995); *see also Lavine v. Glavin*, 194 N.Y.S.3d 403, 405 (4th Dep’t 2023) (finding that qualifying language

¹⁷ The other examples in footnote 19 similarly use qualifying or cautious language: “red flags” and “calls into question.” Complaint ¶¶ 231, 252.

combined with the fact that the “[t]he purpose of the letter was to implore the Inspector General to commence an investigation” indicated that the letter contained statements of opinion).

Plaintiff argues that the allegations underlying the challenged statements—here, that Plaintiff lied about not having the original films or images—“either happened or not. It is not a matter of opinion. This alone suffices to render [Defendants’] accusations actionable.” First Opposition at 13.¹⁸ But under New York law,

even . . . accusations of criminality could be regarded as mere hypothesis and therefore not actionable if the facts on which they are based are fully and accurately set forth and it is clear to the reasonable reader or listener that the accusation is merely a personal surmise built upon those facts. In all cases, whether the challenged remark concerns criminality or some other defamatory category, the courts are obliged to consider the communication as a whole, as well as its immediate and broader social contexts, to determine whether the reasonable listener or reader is likely to understand the remark as an assertion of provable fact.

Gross, 82 N.Y.2d at 155. Here, analyzing the challenged communications as a whole, the Court has determined that any reasonable reader would understand the statements in this category to be hypotheses based on the facts set forth in the FDA Letters.¹⁹

Plaintiff also argues that if the Court finds that any of the challenged statements are statements of opinion, it should find that they are actionable mixed opinions. But Plaintiff has failed to adequately plead that any of the challenged statements are based on false facts or that any of the challenged statements “impl[ies] a basis in undisclosed facts, or facts known only to the author” *Restis*, 53 F. Supp. 3d at 719; *Chau*, 771 F.3d at 129. First, Plaintiffs do not identify allegedly false factual statements on which the Neuroscientists purported to base their opinion statements or

¹⁸ Plaintiff makes these same arguments with respect to the statements the Court categorizes as scientific inferences. Though the Court has found that those statements are protected by *ONY*, it notes that its response to Plaintiff’s arguments applies equally to those statements.

¹⁹ For the same reason, Plaintiff’s argument that “Courts consider statements taking the form of accusations of criminal or unethical conduct as crossing the borderline between fact and opinion” is unpersuasive. First Opposition at 16 (quotations and alterations omitted).

scientific inferences.²⁰ Plaintiff asserts that “the [Complaint] includes dozens of allegations establishing that . . . the underlying facts in the publications are false” First Opposition at 17. But the dozens of paragraphs of the Complaint Plaintiff references do not identify any factual assertions that Plaintiff alleges are false. Those sections instead contain only disagreements with the Defendants’ scientific inferences and opinions. As discussed, those scientific inferences and opinions are not actionable even if Plaintiff disagrees with them.

Second, the Court does not find that any of the challenged opinion statements “imply a basis in undisclosed facts, or facts known only to the author” *Chau*, 771 F.3d at 129. The FDA Letters offered painstaking detailed explanations of the basis for every scientific inference and opinion expressed, often accompanied by visual aids.²¹ Plaintiff does not identify, and the Court has not found, any language in the FDA Letters that a reasonable reader could interpret as implying the existence of “undisclosed facts, or facts known only to the author” that would make the challenged statements actionable as mixed opinions. *Chau*, 771 F.3d at 129. “If the recitation purports to be all the facts on which the decision was based, then it affords the audience an opportunity to evaluate the opinion, including whether the recited facts were sufficient to warrant it.” *Chandok v. Klessig*, 648 F. Supp. 2d 449, 458 (N.D.N.Y. 2009), *aff’d*, 632 F.3d 803 (2d Cir. 2011). Accordingly, none of the statements in this category is actionable.

iii. Factual Statements

In addition to arguing that the challenged statements are mixed opinion statements, Plaintiff directly challenges a number of factual statements. The Court concludes that Plaintiff did not

²⁰ While the Court analyzed all scientific statements under *ONY*, *ONY*’s requirement that inferences be based on “non-fraudulent data” is analogous to the requirement that opinions not be based on false underlying facts. *ONY, Inc.*, 720 F.3d at 497.

²¹ Again, while the Court analyzed scientific inferences under *ONY*, it notes that this analysis applies equally to those statements and shows that the scientific inferences were accompanied by “accurate descriptions of the data and methodology underlying those conclusions,” as required by *ONY*. *ONY, Inc.*, 720 F.3d at 497.

adequately plead that any of these statements were false, as it must to state a claim for defamation.²² *Elias*, 872 F.3d at 104. For instance, Plaintiff challenges the statement, “[i]n its September 14, 2020 press release and 2020 Form 10-K at page 12, Cassava stated that the redo was conducted by an ‘outside lab.’ Contrary to these public statements and filings, the Research Square preprint [] documenting Cassava’s redo analysis states that the experiments were done by Dr. Wang and associates at CUNY.” Complaint ¶ 227. But Plaintiff does not allege that Defendants misrepresented Plaintiff’s press release and 10-K form. It also does not allege that the reanalysis was not conducted by Dr. Wang’s lab or that Dr. Wang is not affiliated with Plaintiff.²³ Accordingly, Plaintiff has not adequately pleaded that this statement is false.²⁴

iv. Summaries and Headings

Finally, the remaining challenged statements in the FDA Letters simply summarize the contents of the documents in which they appear or the contents of previous FDA Letters, or are descriptive headings.²⁵ For instance, Plaintiff challenges the heading, “[s]uspicious Claim #4: Novel Blood Diagnostic SavaDx Represents Plasma Filamin A Level.” Complaint ¶ 252. Plaintiff also challenges the summary, “[w]e are writing to express grave concerns regarding Cassava Sciences as a sponsor of clinical studies using [s]imufilam to treat Alzheimer’s disease (AD). These concerns arise from an assessment of virtually every aspect of their program that has been made available for

²² Barring a false statement, a plaintiff may also state a claim for defamation by pleading that a factually true statement has a false defamatory implication. The Court addresses this argument below.

²³ The Complaint also does not plead that Dr. Wang’s lab is an “outside lab.” It reserves that characterization for the lab that did the original analysis, which it describes as “an outside lab, with whom it had no prior work experience.” Complaint ¶ 73.

²⁴ The same is true for the other challenged factual statements in the FDA Letters. Those include: “Note that the change from Day 1 in total errors (ClinicalTrials.gov) does not match the data in the CTAD presentation. Further, the 50 mg treatment group demonstrated a greater difference than the 100 mg treatment group;” “Each of these publications has been flagged on [PubPeer] for possible image manipulation by, among others, intentional expert in scientific fraud detection Dr. Elisabeth Bik. The central author common to these papers is none other than Dr. Wang.” Complaint ¶¶ 174, 215.

²⁵ Other examples of headings and summaries in the FDA Letters include: “Suspicious Claim #2: Remarkably High Affinity Bonding Between Naloxone and Filamin A;” “We show, using publicly available evidence, that Cassava Sciences has not fulfilled the responsibilities that your agency requires of sponsors in the conduct of clinical studies and the monitoring of patient’s safety.” Complaint ¶¶ 161, 197.

public scrutiny. We find serious deficiencies in the scientific integrity of the sponsor, Cassava Sciences, who exhibits signs of misleading behavior.” *Id.* ¶ 161. But Plaintiff does not contend that these headings and summaries inaccurately or misleadingly describe the contents of the FDA Letters in which they appear. In other words, the alleged defamatory nature of these statements hinges on a determination that the underlying statements they summarize are defamatory. Instead, as described, the Court has found that the underlying statements are statements of scientific inference, opinion statements, or factual statements that Plaintiff does not allege are false, and are therefore non-actionable. Given that the statements in this category accurately summarize non-actionable statements, Plaintiff cannot seriously contend that they are defamatory themselves. *See Schermerhorn v Rosenberg*, 426 N.Y.S.2d 274, 287 (2d Dep’t 1980) (“[I]f headline is a fair index of an accurate article, it is not actionable.”).

B. QCM Report

Next, Plaintiff challenges dozens of statements in the QCM Report. The Court has reviewed each of those statements individually and determined that none of them are actionable. A minority of the challenged statements are factual assertions that Plaintiff has not alleged are false.²⁶ Applying the *Gross* factors, the Court finds that the remaining challenged statements qualify as opinions. Most of those opinions express doubt about Plaintiffs’ scientific claims or speculate about potential conflicts of interest or allegedly untrustworthy people involved in Plaintiff’s operations.

²⁶ For instance, Plaintiff challenges the statement that “IMIC is co-led by a Boris Nikolov, a 51-year-old-immigrant from Bulgaria. Mr. Nikolov has a medical license in Bulgaria, but not in the US (though “MD” occasionally appears next to his name). Our background checks on Mr. Nikolov in Bulgaria revealed a close business association with a Kirstin Valentinova Zaharieva, a real estate investor with 2 criminal records for fraud.” Complaint ¶ 258. Plaintiff does not allege that any of the factual assertions in this statement are false. Plaintiff also challenges that statement that “[m]oreover, Cassava’s management has somehow managed to approve what looks to us like an outrageous compensation system, literally rewarding short-term stock price fluctuations regardless of more traditional metrics [] such as profitability or drug approval milestones.” Complaint ¶ 273. Plaintiff claims this statement is false because “Cassava’s management has not received cash payments tied to the Company’s stock price, and may or may never receive any such cash payments, depending on final test results for simufilam and other variables.” *Id.* But the statement that Plaintiff’s executives have not *yet* received such payments does not contradict QCM’s description of Plaintiff’s compensation structure.

The Court determines that no “reasonable reader could have concluded that [those statements] were conveying facts about the plaintiff.” *Gross*, 82 N.Y.2d at 153. As an illustrative example, the Court used this framework to analyze the challenged statement, “[s]imufilam, Cassava’s only prospective drug, appears [to be] based on allegedly forged scientific research. Phase II trials have been conducted with numerous and serious irregularities which appear to have allowed management to deceive investors about the effectiveness of the drug.”²⁷ Complaint ¶ 161. First, this statement signals it is an opinion by using three different qualifiers: “appears to be,” “allegedly,” and “appear to be.” See, e.g., *Small Bus. Bodyguard Inc.*, 230 F. Supp. 3d at 312; *Bellavia Blatt*, 151 F. Supp. 3d at 296 (collecting cases).²⁸

Second, the full context of the statement also strongly signals to a reasonable reader that the statement is an opinion. *Gross*, 82 N.Y.2d at 153. The statement appears in an investor report that is clearly identified as such. Cf. *MiMedx Grp., Inc. v. Sparrow Fund Mgmt. LP*, No. 17CV07568PGGKHP, 2018 WL 847014, at *7 (S.D.N.Y. Jan. 12, 2018) (finding that the context of an exchange between a “two sophisticated investors,” including a short seller, demonstrated that a statement was an opinion) *report and recommendation adopted*, No. 17 CIV. 7568 (PGG), 2018 WL 4735717 (S.D.N.Y. Sept. 29, 2018); see also *Yangtze River Port and Logistics Ltd. v. Research*, No. 150721/2019, 2020 WL 905770, at *7 (N.Y. Sup. Ct., Feb. 25, 2020) (noting that “courts frequently determine that investment analysis . . . constitutes the author’s opinion” in part on the basis of the

²⁷ Other examples of opinions statements in the QCM Report include: “[i]nterestingly, only a few years later, about when IMIC starts collaborating with Cassava, the financial situation for the couple improves dramatically . . . We find the sudden change in fortune remarkable and wonder whether it might be related to IMIC’s relationship with Cassava and the noted anomalies in the study;” “In Cassava, there are a number of red flags: in some cases role of monitor has been assigned to Nadav Friedman, the Company’s Chief Medical Officer and Chief Operating Officer. That a company’s executive be placed in such a position is both unusual (it’s a very tedious job for a senior figure) and worrying (it creates a conflict of interest as Cassava is unlikely to blow the whistle on itself) . . . This is even more disturbing considering that Mr. Friedman has been sued for securities fraud for making allegedly fraudulent statements regarding Cassava’s former drug Remoxy.” Complaint ¶¶ 258, 266.

²⁸ The other example statements in footnote 30 similarly employ speculative language, such as “we find,” and “red flags.” In fact, every challenged statement in the QCM Report—excluding the factual assertions that Plaintiff has not alleged are false—uses at least one qualifier, conditional phrase, or other word or phrase indicating speculation.

publication medium) (collecting cases). The report begins with a disclaimer that it “reflects the opinions and projections” of QCM, and it includes more than 100 uses of qualifying or conditional language throughout. QCM Report at 3. It also discloses QCM’s short position in Plaintiff’s stock. *Id.*; see *Silvercorp Metals Inc.*, 2012 WL 3569952, at *2 (finding that a defendant’s disclosure of his short position “indicates to the reader that the author is expressing his opinion”). In addition, the report provides examples of other activist investing campaigns by QCM and touts their success rate. *See* QCM Report at 6. This context, particularly the transparency about QCM’s motives for creating the report, strongly signal that the author is expressing an opinion.

As another example, the Court used the same framework to assess the challenged statement, “[t]here are powerful incentives for Cassava’s management to possibly commit misconduct in clinical trials, deceiving investors about the real prospects of [s]imufilam.” Complaint ¶ 273. In this context, whether there exist “powerful incentives” for Plaintiff’s management to commit scientific misconduct is a matter of opinion that cannot be proven true or false. *Cf. Chau v. Lewis*, 935 F. Supp. 2d 644, 655 (S.D.N.Y. 2013) (finding that the statement that “[t]he bond market had created what amounted to a double agent—a character who seemed to represent the interests of investors when he better represented the interests of Wall Street bond trading desks” could not be proven true or false), *aff’d*, 771 F.3d 118 (2d Cir. 2014); *61 Crown St., LLC v. Kingston Uptown Bus. Men’s Ass’n, Inc.*, 2020 NY Slip Op 33347(U), ¶ 15 (N.Y. Sup. Ct. 2020) (finding that “plaintiffs’ motivations . . . are not capable of being proven true or false”). The use of the qualifier “possibly” and modifier “powerful” also signals that the statement represents an opinion. *See Bellavia Blatt*, 151 F. Supp. 3d at 296; *Wexler v. Dorsey & Whitney, LLP*, No. 18-CV-3066-SJB, 2019 WL 5485265, at *7 (E.D.N.Y. Oct. 25, 2019) (finding that “the addition of ‘major,’ an adjective, is an attempt to ascribe a measure of significance to the scheme. What is major to one is minor to another; it is a term that adds relativity, and therefore uncertainty, to the meaning” of a statement, indicating it may be a statement

of opinion), *aff'd*, 815 F. App'x 618 (2d Cir. 2020) (summary order). Coupled with the context of this statement described in the previous paragraph, no reasonable reader would interpret this statement as a factual assertion.²⁹

The Court also finds that, contrary to Plaintiff's contention, none of the challenged statements qualify as actionable mixed opinion because Plaintiff has failed to adequately plead that any of them "imply a basis in undisclosed facts, or facts known only to the author" or are based on false facts. *Chau*, 771 F.3d 118 at 129; *Restis*, 53 F. Supp. 3d at 719. First, Plaintiff identifies several portions of the QCM Report that it unpersuasively argues imply a basis in undisclosed facts. Plaintiff complains that "in its Report QCM claims to rely on 'multiple expert opinions' it obtained from 'industry leaders' and 'consultants hired by QCM,' but only discloses two." Second Opposition at 17. However, as QCM points out, "two" is "multiple." Dkt. No. 92 at 7. Plaintiff also takes issue with QCM's reliance on an anonymous message board post, a reference to conversations with unnamed former employees of Cassava, and a reference to unnamed studies that utilized a particular sample population criterion that Plaintiff's studies lacked. Second Opposition 17–18. But *Gross* and its progeny do not require that an author disclose the identities of her sources in order for her opinion to qualify as a non-actionable, pure opinion. They require only that she disclose the facts on which her opinion is based and that she does not imply a basis in other, undisclosed facts. *Chau*, 771 F.3d at 129; *see also Biro v. Condé Nast*, 883 F. Supp. 2d 441, 461 n.8 (S.D.N.Y. 2012) ("Although reliance on an 'unverified, anonymous source' has bearing on whether a statement was made with actual malice, it has no bearing on whether a statement is reasonably susceptible of a defamatory meaning or is privileged as opinion.") (quoting *Stern v. Cosby*, 645 F.

²⁹ Plaintiff's argument that QCM's description of its extensive investigation and its past successful activist investing campaigns transforms its statements into statements of fact is unpersuasive. Plaintiff cites no authority to suggest that an author's conviction in and support for its opinions renders its opinions statements of fact. A rule that privileges shallowly researched or capricious opinions but not thoroughly researched or steadfast opinions would also make little sense.

Supp. 2d 258, 278 (S.D.N.Y. 2009)).³⁰

Here, the QCM Report disclosed those facts by linking to the anonymous online comment, describing the relevant content of the conversations with anonymous former employees, and describing a difference between certain unnamed studies and Plaintiff's studies that QCM found important to its analysis. *See Shader v. Overby*, No. 907245-20, 2022 WL 3567123, at *6 (N.Y. Sup. Ct. Jan. 25, 2022) (“There is no implication in the initial post that defendant has some other, hidden information on which this conclusion was premised”); *Sandals Resorts Int’l Ltd. v. Google, Inc.*, 925 N.Y.S.2d 407, 416 (1st Dep’t 2011) (“Far from suggesting that the writer knows certain facts that his or her audience does not know, the e-mail is supported by links to the writer’s sources.”). Accordingly, Plaintiff has not adequately pleaded that this statement is an actionable mixed opinion due to an implied basis in undisclosed facts.

Second, Plaintiff claims that “the QCM Report is full of false statements regarding Cassava and its research.” Third Objections at 18. Plaintiff’s Second Opposition sets forth the “facts” in the QCM Report it alleges are false. See Second Opposition at 5–7. But the Second Opposition fails to identify a single false factual statement in the QCM Report. Instead, it reiterates Plaintiff’s disagreements with the opinions expressed by QCM, such as the opinion that Plaintiff may have manipulated its data. Accordingly, Plaintiff has failed to adequately plead that any of the statements in the QCM Report constitute actionable mixed opinion.

³⁰ In support of this argument, Plaintiff cites *Public Relations Socy. of Am., Inc. v. Road Runner High Speed Online*, 8 Misc.3d 820, 799 N.Y.S.2d 847 (N.Y. Sup. Ct., 2005), in which the court found a statement was an actionable mixed opinion because “[t]he writer of the e-mail implie[d] that his opinion, as a whole, [was] shared by other persons in the organization, who [were] not named.” First, with respect to QCM’s references to unnamed other studies and former Cassava employees, QCM did not assert that these sources endorsed its opinions. Rather, it relied on these sources for specific facts that supported its opinions. Second, with respect to the anonymous online comment, QCM did “not imply that [its] opinion is shared by other anonymous individuals to give the implication that there are more unstated facts supporting [its] position” *Nanoviricides, Inc. v. Seeking Alpha, Inc.*, No. 151908/2014, 2014 WL 2930753, at *5 (N.Y. Sup. Ct. June 26, 2014). To the contrary, QCM linked to the full anonymous opinion so that readers could evaluate it and its purported factual basis for themselves.

C. QCM Grego Interview

Plaintiff also briefly challenges four statements made in a print interview by QCM's Managing Partner Gabriel Grego. Interpreted in context, these statements share many characteristics with the QCM Report and would be clearly understood as opinions. Mr. Grego made the challenged statements during an interview about QCM's activist investing activities. *Cf. MiMedx Grp.*, 2018 WL 847014, at *7. He summarized the contents and conclusions of QCM's Report, which he also encouraged readers to review for themselves. The interview contains a hyperlink to the report. Additionally, Mr. Grego echoes the qualified, cautious tone of the report, using phrases like "we believe" and "may" and referring to "evidence" of wrongdoing. *See Bellavia Blatt*, 151 F. Supp. 3d at 296. Accordingly, the Court finds that Mr. Grego's statements in the interview would be understood by any reasonable reader as expressions of opinions. Furthermore, they do not qualify as actionable mixed opinions because he sets forth their basis by referencing and linking to the QCM Report.

D. Dot Com Defendants' Slide Decks

Plaintiff challenges additional statements made by the Dot Com Defendants in the three slide deck presentations posted to their websites cassavafraud.com and simuflimflam.com. The Court addresses the statements in each slide deck in turn.

i. Shambolic Charade Deck

The Court has reviewed each of the challenged statements in the Shambolic Charade presentation individually and determines that none of them are actionable. The presentation consists of: (1) non-actionable republications of scientific conclusions, (2) non-actionable opinions, and (3) factual assertions Plaintiff does not allege are false. The Court will address each category in turn.

First, the Shambolic Charade presentation repeats a number of scientific conclusions stated

in the Dot Com FDA Letter or in analyses by users, including the Dot Com Defendants, on an online platform called PubPeer.³¹ As a representative example, the presentation includes a slide cataloguing what it refers to as “Cassava’s Unrealistic Claims,” which ends with an instruction to the reader to “[r]efer to our report for the complete investigation of the company’s claims and published data on biomarkers.” Shambolic Charade Deck at 24. This section of the presentation is prefaced by the statement, “we present highlights from our full [Dot Com FDA Letter] of the egregious data anomalies and manipulation of both the biomarker and cognitive measurements from Cassava’s Phase 2 trials.” Shambolic Charade Deck at 6. The first page also hyperlinks to the Dot Com FDA Letter. *Id.* at 2.

Such republications of scientific conclusions are protected under *ONY*. In *ONY*, in addition to finding that scientific conclusions in a journal article were non-actionable as scientific debate, the Second Circuit affirmed that a press release that “accurate[ly]” presented those scientific inferences was also not actionable as tortious interference.³² *ONY, Inc.*, 720 F.3d at 490. The court based its affirmance on the findings that “(a) the article itself was not actionable and (b) [plaintiff] did not separately allege any additional misleading statements.” *ONY, Inc.*, 720 F.3d at 490. Here, Plaintiff does not allege that the Shambolic Charade Deck misrepresented anything in the FDA Letters or in the PubPeer sources to which it cited. Defendants’ more colorful, inflammatory republications of those conclusions, such as its reference to Cassava as a “charade,” do not rescue Plaintiff’s claim.

³¹ Plaintiff does not allege that any of the PubPeer posts referenced in Defendants’ presentation are themselves defamatory. However, Plaintiff challenges the statement “[t]here is now no serious question that the majority of Dr. Wang’s work—including that with Cassava—contains fabrications.” Complaint ¶ 179. In support of this accusation, the presentation hyperlinks to and screenshots PubPeer analyses of Dr. Wang’s studies that accuse him of data manipulation. Some of the PubPeer analyses list one of the Dot Com Defendants as the author and include substantially the same content as the Dot Com FDA Letter. The linked statements on PubPeer are incorporated by reference, and the Court finds that they are protected scientific debate under *ONY*, for the same reasons as the challenged statements in the FDA Letters.

³² While the plaintiff claimed tortious interference, its claim was based on the dissemination of alleged injurious falsehoods contained the press release. The district court held that as a result, the claim “sound[ed] in defamation.” *ONY, Inc. v. Cornerstone Therapeutics, Inc.*, No. 11-CV-1027S, 2012 WL 1835671, at *6 (W.D.N.Y. May 18, 2012), *aff’d*, 720 F.3d 490 (2d Cir. 2013) (citing *Cantor Fitzgerald, L.P. v. Peaslee*, 88 F.3d 152, 157 (2d Cir. 1996)).

The Dot Com FDA Letter and PubPeer posts, which are clearly identified as the bases for this statement, concluded that Plaintiff fabricated or manipulated data and made false claims about simufilam. Characterizing Plaintiff's activities as a "charade" is an accurate representation of those conclusions. Accordingly, none of the statements in this category are actionable.

Second, Plaintiff challenges statements that would be understood by any reasonable reader to be statements of opinion. *Gross*, 82 N.Y.2d at 152. As an illustrative example, Plaintiff challenges the statement that "Cassava claims [s]imufilam is safe, but data suggests a cavalier attitude towards safety, a calculated avoidance of critical studies, and dependence on unreliable investigators."³³ Complaint ¶ 168. The qualifying language "suggests," as well as the statement's inclusion of Plaintiff's contrary position that simufilam is safe, indicate that this statement is a statement of opinion. *See Bellavia Blatt*, 151 F. Supp. 3d at 296. Context also indicates that it is an opinion. The statement appears in a presentation containing a disclosure of the authors' short positions in Plaintiff's stock and a disclaimer that "[o]ur analysis is entirely based on publicly available information and visible for everyone to see and challenge," further indicating that the statement is an opinion. *Shambolic Charade Deck* at 4. *See Silvercorp Metals Inc*, 2012 WL 3569952, at *2.³⁴

Third, Plaintiff challenges factual assertions that it does not allege are false. As an illustrative example, Plaintiff asserts that the statement "Cassava created exclusion criteria AFTER the data was analyzed Each assay had a customized mix of exclusion criteria applied As much as 40% of data was creatively removed" is defamatory. Complaint ¶ 222. But it does not allege, as it must to state a claim for defamation, that any of these three factual assertions is false.³⁵ To the extent that

³³ Other examples of opinions in the *Shambolic Charade Deck* include statements that "[i]n our view, the failure of the original analysis was choreographed [sic] to justify the analysis of samples by Dr. Wang's lab who could produce desirable outcomes," and that various circumstances "call[] into question whether the investigators leading the [s]imufilam program are qualified to conduct the trial." Complaint ¶¶ 210, 222.

³⁴ The same characteristics also apply to the examples in footnote 33, which contain the phrases "in our view" and "call into question." *Id.*

³⁵ Barring a false statement, a plaintiff may also state a claim for defamation by pleading that a factually true statement has a false defamatory implication. The Court addresses that argument below.

Plaintiff takes issue with the modifier “creatively,” a reasonable reader would clearly understand this statement to be the author’s opinion of Plaintiff’s exclusion criteria. As used here, the word “creatively” has no “precise meaning,” and is not capable of being “proven true or false.” *Gross*, 82 N.Y.2d at 153. Additionally, the context of this statement as described in the previous paragraph indicates that it is an opinion. Finally, Defendants describe the exclusion criteria that they characterize as “creative[],” allowing reader “an opportunity to evaluate the opinion, including whether the recited facts were sufficient to warrant it.” *Chandok*, 648 F. Supp. 2d at 458. Accordingly, this statement is not actionable.³⁶

ii. SavaDX Deck

Plaintiff also challenges three statements in the SavaDX Deck: “We find the implied MOA and scientific rationale . . . Laughably unsubstantiated . . . Inconsistent with Cassava claims so far . . . Contrary to FlNA functions in literature”; “Discovered emails suggest numbers totally fabricated = Fraud?”; and “SavaDX Exposed: A revolutionary diagnostic for Alzheimer’s Disease or a scam of scientifically illiterate investors?” Complaint ¶¶ 161, 252.

Each of these statements constitutes a non-actionable opinion. The first signals it is an opinion by beginning with the phrase “we find.” See *Bellavia Blatt*, 151 F. Supp. 3d at 296. The second is phrased as a question rather than an assertion, and it appears in a bulleted list alongside factual assertions that are conspicuously *not* phrased as questions. See SavaDX Deck at 16. See, e.g., *Sandals Resorts International Ltd.*, 925 N.Y.S.2d at 414–415 (finding that a communication “replete

³⁶ The presentation contains several other characterizations, which, like “creative,” cannot be proven true or false. For instance, the presentation states that Cassava has “Shady Players and Shady History,” “A Tormented Corporate History,” and an “Impotent, Conflicted Scientific Advisory Board,” and “inadequate and unreliable safety studies.” Complaint ¶¶ 161, 168. Like “creatively,” these descriptors have no precise meaning and are not capable of being proven true or false. Cf. *Carey v. Carey*, 160 N.Y.S.3d 854 (N.Y. Sup. Ct.) (“Words like ‘sketchy’ and ‘questionable’ lack precise meanings and express [the defendant’s] opinion of plaintiff’s acquaintances.”). In the context of the presentation, a reasonable reader would understand these descriptors as the authors’ opinions. The presentation sets forth the facts on which those opinions are based, including why it considers Plaintiff’s safety studies inadequate and unreliable.

with rhetorical questions . . . indicate[d] that the writer is expressing his or her personal views.”). The third, also phrased as a question, is the title of the presentation, setting a conjectural tone for the entire presentation. *See, e.g., Brimelow v. New York Times Co.*, No. 20 CIV. 222 (KPF), 2020 WL 7405261, at *11 (S.D.N.Y. Dec. 16, 2020) (considering that “the overall tone of the article is one of commentary rather than neutral” factual reporting in finding that a statement therein would be understood as an opinion), *aff’d*, No. 21-66-CV, 2021 WL 4901969 (2d Cir. Oct. 21, 2021) (summary order). The broader context of the slide deck also indicates that these statements are opinions. The SavaDX Deck is posted on the Dot Com Defendants’ websites along with the Dot Com FDA Letter and containing opinions and scientific inference. Accordingly, none of the statements are actionable.³⁷

iii. Seeing through the Blind Deck

Finally, Plaintiff challenges four statements in the Seeing Through the Blind Deck. Two of the statements posit that the Open Label study, in spite of Plaintiff’s public representations, was not double-blind. The other statements speculate that Plaintiff’s Phase 2b Study may have also not been double-blind. The Court finds that the statements regarding the Phase 2b Study would have been understood as opinions by any reasonable reader and are therefore non-actionable. However, the statements regarding the Open Label Study are more ambiguous and are therefore actionable. Nevertheless, because Plaintiff has failed to adequately plead actual malice, Plaintiff has still failed to state a claim for defamation with respect to those statements.

1. Open Label Study Statements

The Seeing Through the Blind presentation states that “[e]mails show both Cassava & Wang

³⁷ Plaintiff also argues that the Dot Com Slide Decks are actionable mixed opinion because they are based on false underlying facts. Third Opposition at 14-15. However, once again, Plaintiff points only to scientific inferences and opinions with which it disagrees, rather than factual assertions. Therefore, Plaintiff has failed to adequately plead that any of the statements in the Dot Com Slide Decks are actionable mixed opinion.

were NOT BLINDED during the open-label study Emails retrieved from a FOIL request to CUNY expose Cassava and the Wang Lab as being unblinded during sample analysis, prior to data presentation and while study is ongoing.” Seeing through the Blind Deck at 5. It also states that “Hence, whether a patient is ON or OFF the drug is known to the person analyzing samples.” Seeing Through the Blind Deck at 6. It accompanies this claim with graphics and two screenshots of the FOIL material. *See id.* Applying the *Gross* framework, the Court finds that a reasonable reader might interpret these statements as factual assertions. The statements contains no qualifying language, nor do any of the other statements in this deck that posit that the study was not double-blind. The assertion that Dr. Wang was “reveal[ed]” to be unblinded during the Open Label Study is juxtaposed against other statements, both in this slide deck and others on the Dot Com Defendants’ websites, that are posed as questions or couched in qualifying and conditional language. Accordingly, a reasonable reader could interpret this statement as a factual assertion.

Plaintiff has adequately pleaded that this statement is defamatory under New York Law. *Elias*, 872 F.3d at 104. As to the first factor, Plaintiff alleged that the statement is false by alleging that contrary to Defendants’ assertion, “[t]he testing results published by Cassava were done by individuals who were ‘blind’ to whether they were analyzing samples from a patient who took a placebo or simufilam.” Complaint ¶ 157. As to the second, Plaintiff alleged that the statement was “published to a third party” by alleging that the Seeing through the Blind Deck was posted to the Dot Com Defendants’ public websites. *Elias*, 872 F.3d at 104. As to the third, Plaintiff has adequately pleaded that the statement is not “privilege[ed]” as an opinion or otherwise. *Id.* Finally, Plaintiff has adequately pleaded that the statement is “one of the types of publications actionable regardless of harm.” *Id.*

“New York recognizes a limited category of statements to be libelous per se which do not require pleading and proof of special damages.” *Davis v. Ross*, 754 F.2d 80, 82 (2d Cir. 1985). “If a

statement is defamatory per se, injury is assumed” and no special damages need be alleged. *Celle v. Filipino Rep. Enterprises Inc.*, 209 F.3d 163, 179 (2d Cir. 2000). “The line between statements that are defamatory per se and those that require proof of special damages remains fuzzy.” *Id.* However, “[o]ne useful general rule is that ‘a writing which tends to disparage a person in the way of his office, profession or trade’ is defamatory per se and does not require proof of special damages.” *Id.* A related rule is that “[w]here a statement impugns the basic integrity or creditworthiness of a business, an action for defamation lies and injury is conclusively presumed.” *Id.* (quoting *Ruder & Finn Inc. v. Seaboard Surety Co.*, 52 N.Y.2d 663, 439 (1981)).

For a statement to qualify as one that tends to injure another in his or her “trade, business, or profession”—in other words, per se defamation—the statement “must be made with reference to a matter of significance and importance for [the operation of the business], rather than a mere general reflection upon the plaintiff’s character or qualities.” *Lieberman v. Gelstein*, 80 N.Y.2d, 429, at 436 (1992). The allegedly defamatory statement must be targeted at the specific standards of performance relevant to the plaintiff’s business and must impute conduct that is “of a kind incompatible with the proper conduct of the business, trade, profession or office itself.” *Id.*; *see also Van-Go Transp. Co. Inc. v. New York City Bd. of Educ.*, 971 F. Supp. 90, 98 (E.D.N.Y. 1997) (“Reputational injury to a person’s business, or to a company, consists of a statement that either imputes some form of fraud or misconduct or a general unfitness, incapacity, or inability to perform one’s duties.”).

Here, the defamatory statements accused Plaintiff of lying to the public and to regulators about the parameters of a clinical trial for its lead drug candidate. Such behavior would amount to scientific fraud, which is plainly “incompatible with the proper conduct” of a biotechnology company. *Lieberman*, 80 N.Y.2d at 436. Accordingly, Defendants’ statements about the Open Label Study are defamatory. However, as discussed below, Defendants have not stated a claim for

defamation because they have failed to adequately plead that the statements were published with actual malice.

2. Phase 2b Study Statements

Particularly juxtaposed against the statements about the Open Label Study, any reasonable reader would interpret the statements speculating that the Phase 2b Study was not double-blind as statements of opinion. After asserting that the Dr. Wang was not blinded during the Open Label Study, the presentation asks, “[w]as he unblinded for the entire [Phase 2b Study]? If Cassava is lying about blinded analysis now, were they lying about it the whole time?” Seeing through the Blind Deck at 15. It concludes based on the FOIL email evidence not that the Phase 2b Study was unblinded, but that there is a “risk” of data manipulation. *Id.* at 9; *see, e.g., Sandals Resorts International Ltd.*, 925 N.Y.S.2d at 414–15; *Frascatore v. Blake*, 344 F. Supp. 3d 481, 498 (S.D.N.Y. 2018) (“[T]he language of speculation—that [the author] ‘wonder[s]’ whether there are more complaints—is conjectural and not susceptible to an interpretation that it is a statement conveying facts.”).

Nor do these statements qualify as actionable mixed opinion. The presentation made clear that the authors based their opinions on emails obtained via FOIL. Seeing through the Blind Deck at 5. The presentation contained screenshots of these emails and hyperlinks to the others. Plaintiff does not allege that the emails are falsified or that any of the other asserted facts on which these opinions are based are false. Accordingly, the statements in this category are non-actionable.

E. Defamation by Implication

Plaintiff argues that even if none of the scientific inferences, opinions, factual statements, or summaries in the FDA Letters, QCM Report, Dot Com Slide Decks, or Grego Interview explicitly communicated defamatory messages, they had “defamatory implication[s].” *See, e.g., First Objections* at 13. Specifically, Plaintiff claims that the challenged statements “imply” that Plaintiff “is a fraud,” that Plaintiff made false scientific claims, that Plaintiff engaged in data manipulation or

fabrication, that Plaintiff has not tested simufilam for safety, that Plaintiff is untrustworthy due to its involvement with people who have been accused or convicted of criminal activity, and that Plaintiff's executives engage in insider trading. Complaint ¶¶ 161, 168, 174, 258, 266, 273. The Court finds that Plaintiff has not stated a claim for defamation under the theory of defamation by implication either.

“Neither the New York Court of Appeals nor the Court of Appeals for the Second Circuit has addressed the proper standard for defamation by implication, let alone its finer contours.” *Cohen v. Walcott*, No. 13-CV-9181 (JGK), 2017 WL 2729091, at *5 (S.D.N.Y. June 23, 2017) (citing *Biro v. Conde Nast*, 883 F. Supp. 2d 441, 466 (S.D.N.Y. 2012)). The prevailing pleading standard requires an “especially rigorous showing that (1) the language may be reasonably read to impart the false innuendo, and (2) the author intends or endorses the inference.” *Biro*, 883 F. Supp. 2d at 466. “The alleged innuendo may not enlarge upon the meaning of words so as to convey a meaning that is not expressed.” *Id.* (citations and quotations omitted). However, where the author is expressing an opinion, “[s]imply looking to whether the author intended or endorsed the inference is limited in its helpfulness.” *Id.* at 467. Because “the Constitution protects an author’s right to draw an explicit conclusion from fully disclosed facts, then an unstated inference that may arise in a reader’s mind after reading such facts is also protected as an implicit expression of the author’s opinion.” *Id.* at 468. Therefore, where “the implication is simply reflective of the author’s opinion based on the facts set forth,” a plaintiff cannot state a claim for defamation by implication. *Id.*

With respect to the claimed implications that Plaintiff did not test simufilam for safety, Plaintiff has failed to make the “rigorous showing” that any of the challenged statements could be reasonably read to imply that innuendo, let alone that the Neuroscientist Defendants intended to imply it. *Biro*, 883 F. Supp. 2d at 466. The communications that Plaintiff claims contain the implication that Cassava did not test for simufilam for safety in fact acknowledge that it did. For

instance, Plaintiff complains about a statement referencing “inadequate and unreliable safety studies.” Complaint ¶ 168. Implicit in that statement is that Cassava did conduct safety studies. Whether those studies were “inadequate and unreliable” is a matter of opinion, and as discussed above, the Court has determined that any reasonable reader would interpret the challenged statements in this communication as statements of opinion.

The other claimed implications are “simply reflective of the author’s opinion based on the facts set forth” and therefore are not actionable. *Biro*, 883 F. Supp. 2d at 468. As described, the FDA Letters, QCM Report, Dot Com Slides Decks, and Grego Interview contained various opinions and scientific conclusions. Many of those opinions and scientific conclusions are more nuanced than the messages that Plaintiff claims they imply.³⁸ For instance, Defendants expressed that the limitations of methodologies employed in certain simufilam studies “raise[d] troubling questions” about Plaintiff’s claims about simufilam. Complaint ¶ 174. They described anomalies in Western blots and posited that the images “appear[ed] to” show indications of manipulation. *Id.* ¶ 179. They hypothesized that the criminal histories of some of Plaintiff’s associates “does not bode well for the legitimacy of the Simufilam trials and may explain the irregularities that we have identified earlier.” *Id.* ¶ 265. As signaled by their conditional language (“questions,” “appears,” “may”), and their context, discussed previously, some of these statements are protected statements of opinion. The others, as discussed previously, appear in the FDA Letters and are protected scientific conclusions. Additionally, as described previously, these opinions and scientific conclusions are accompanied by a recitation of the facts or data on which they purport to be based.

³⁸ The Court notes that Plaintiff asserts that several of the challenged statements imply that Plaintiff’s executives engaged in insider trading. *See* Complaint ¶ 273. Because those statements could not conceivably be read to imply that Plaintiff’s executives engaged in insider trading or even sold Plaintiff’s stock at all, the Court infers that Plaintiff means instead to claim that those statements implied that Plaintiff’s executives misled investors. This implication is “simply reflective of the author’s opinion based on the facts set forth” and therefore the statements are not actionable. *Biro*, 883 F. Supp. 2d at 468.

To the extent that Plaintiff challenges those factual recitations as carrying defamatory implications, those implications are also “protected as an implicit expression of the author’s opinion.” *Biro*, 883 F. Supp. 2d at 468.

A. Tweets

Plaintiff also challenges nearly one thousand tweets made on X by QCM and the Dot Com Defendants. The Court concludes that Plaintiff has adequately pleaded that some of the tweets were defamatory. However, because Plaintiff has failed to plead that Defendants published those tweets with actual malice, it has failed to state a claim for defamation.

i. Defamatory Connotation

The Court has analyzed each of the tweets individually. As an initial matter, while the context of each challenged tweet is crucial to the Court’s analysis, Plaintiff has alleged almost no facts regarding their context. *See Gross*, 82 N.Y.2d at 153 (discussing the importance of context to an analysis of an allegedly defamatory statement); *Levin*, 119 F.3d at 195 (same). With respect to all but a few dozen of the challenged tweets, Plaintiff alleges only the posting date, author, and the text of the tweet.³⁹ Had any party provided exhibits showing the context in which each tweet appeared—for instance, the other posts the tweet appeared alongside on the author’s X page, the tweet that a challenged tweet responded to, or the thread in which a challenged tweet appeared—the Court would have evaluated each statement in its full context. *See Ganske v. Mensch*, 480 F. Supp. 3d 542, 545 (S.D.N.Y. 2020) (finding it proper for the court to consider defendant’s exhibit displaying the context of an allegedly defamatory tweet) (“[T]o look only at the Tweet—rather than all three tweets posted during this twenty-minute span—would not provide the necessary or proper context for understanding Defendant’s statements that morning.”). Because neither party provided this

³⁹ Plaintiff alleges additional facts about a small fraction of the tweets, in footnotes to Appendix A, and the Court has considered that context.

information, the Court is tasked with considering each challenged tweet in isolation, rather than in the full context of the particular thread or X profile in which it appeared.

Analyzing each tweet individually, the Court finds that Plaintiff has failed to adequately plead defamation with respect to the majority of the challenged tweets. Hundreds of the tweets do not mention Cassava, simufilam, or SavaDX. On their face, lacking context, many of these tweets are not pleaded to be “of and concerning” Plaintiff. *Elias*, 872 F.3d at 104. For instance, Plaintiff challenges a QCM tweet that reads simply “[t]his looks damning to us” and a tweet by one of the Dot Com Defendants that reads “very well, from now on I shall call it a scientific fraud, that I think I have proven. All good now.” Dkt. No. 30-2 (“Appendix A”) at 9, 11. These tweets may relate to Plaintiff, but Plaintiff does not plead that fact. The Court is required to construe Plaintiff’s pleading generously, but it cannot create facts that Plaintiff has chosen not to present.

Other tweets could not reasonably be subject to a defamatory meaning because they have *no* clear meaning lacking additional context. For instance, Plaintiff challenges a tweet by Enea Milioris that says only “\$SAVA mental gymnastics.” *Id.* at 15; *see Lan Sang*, 951 F. Supp. 2d at 518 (holding that a court may not “strain” to interpret statements in their most defamatory sense). Still other tweets are non-actionable because any reasonable reader would understand them as opinion statements that set forth the facts on which they are based, either in the tweet or via a link. For instance, Plaintiff challenges a tweet that “[n]o, the short thesis is that nearly everything Cassava has ever done is largely faked” and links to Cassavafraud.com, which contains the Dot Com FDA Letter and slide decks. Appendix A at 3.

However, the Court finds that QCM and each of the Dot Com Defendants published defamatory tweets (the “Defamatory Tweets”). Those include,

- “\$SAVA remains a complete scientific fraud that is going to have its rug pulled any day, and Mr. Market knows it.” - Adrian Heilbut;

- “How is it legal for \$SAVA to spinal tap folks and then just make up their biomarker values?” - Eneas Milioris;⁴⁰
- “Either \$sava has been lying to us for months about having the blots or they submitted faked evidence to the Journal of Neuroscience.” - Jesse Brodtkin;
- “It is precisely FOR those humans taking [s]imufilam that we are fighting! I believe it is unethical and counterproductive to give false hope and profit from that!!! Placebo can be had elsewhere and just as effectively. We should be exploring REAL treatments!” - Patrick Markey;⁴¹
- “\$SAVA you have been caught red handed! Stop the trials and spare the patients your useless treatment! #Savastoptheuselesstrials #savastopthetrials” - QCM.

Appendix A at 9, 22, 42, 60.⁴²

The Defamatory Tweets either directly accused Plaintiff of scientific misconduct, stated that simufilam was not effective, or heavily intimated that Plaintiff was engaged in fraudulent behavior. *See Biro*, 883 F. Supp. 2d at 466 (holding that a plaintiff can adequately plead that a statement is defamatory if “(1) the language may be reasonably read to impart the false innuendo, and (2) the author intends or endorses the inference”). Many of the Defamatory Tweets were not hedged with qualifying or conditional language, and Plaintiff did not allege any contextual facts about them, other than the fact that they were posted on X, that would indicate that they were opinions.

⁴⁰ While this tweet is phrased as a question, it is not a question of *whether* Plaintiff “spinal tap[ped] folks and then just ma[d]e up their biomarker values” but how it was legal for Plaintiff to do so.

⁴¹ While this statement contains qualifying and imprecise language, which can indicate an expression of opinion, none of that language is applied to the defamatory statement that simufilam is no more effective than a placebo.

⁴² A full list of the tweets that the Court holds are actionable, based on the limited allegations before it and construing the tweets in the light most favorable to Plaintiff, is appended to this opinion as Exhibit A. That list includes mixed opinions that imply a basis in facts not disclosed to the reader, as well as factual assertions that Plaintiff has alleged are false. The Court emphasizes that contextual allegations, such as allegations about the thread in which a challenged tweet was posted, allegations about other tweets that the author posted in close proximity to a challenged tweet, or allegations about the author’s X profile might impact each of those determinations. Lacking those contextual allegations, the Court examined each tweet in isolation. In the few cases that Plaintiff alleged additional facts about a tweet in a footnote to its Appendix A, the Court considered those allegations.

Defendants argue that statements on X are readily understood as statements of opinion, and it is true that courts often find tweets non-actionable. *See, e.g., Ganske v. Mensch*, 480 F. Supp. 3d 542, 552–553 (S.D.N.Y. Aug. 20, 2020) (finding that tweets were not actionable in part because X is a forum “equally—if not more—informal and freewheeling” than many other locations on the internet, and tweets were “generally informal and unedited” and given less credence by readers) (internal quotations omitted). But “[w]eb content, like all content, must be assessed on a case by case basis.” *Eros Intern. PLC v. Mangrove Partners*, 2019 WL 1129196 at *9 (N.Y. Sup. Ct. 2019), *aff’d*, 140 N.Y.S.3d 518 (1st Dep’t 2021). “Although several years ago it was suggested that ‘readers give less credence to allegedly defamatory remarks published on the Internet than to similar remarks made in other contexts,’ this observation, even if it is assumed to be true, should not be read to ‘immunize [content] the focus and purpose of which are to disseminate injurious falsehoods about their subjects’” *Id.* (quoting *Silvercorp Metals Inc.*, 2012 WL 3569952 at *2 and *Sandals Resorts International*, 925 N.Y.S.2d at 416).

Other Defamatory Tweets were phrased in a way that a reasonable reader would interpret as opinion or speculation, but lacked a recitation of the facts on which they were based. For instance, Jesse Brodtkin tweeted, “[i]t looks like \$sava may be doing some sketchy patient selection in their OL clinical trial... I know, it’s shocking.” Appendix A at 63. A reasonable reader would understand this statement as an opinion because it uses conditional phrasing (“may,” “looks like”) and is posted on X. But on its face, lacking context, the tweet implies that it is based on undisclosed facts. Accordingly, it is actionable as a mixed opinion. *See Chau*, 771 F.3d at 129.

Plaintiff adequately pleads the remaining elements of defamation by alleging that the Defamatory Tweets are false because Plaintiff has not committed scientific misconduct and simufilam is effective, and by alleging that the tweets were published on X. *Elias*, 872 F.3d at 104. In addition, because all of the Defamatory Tweets accused Plaintiff of lying, scientific fraud, or

criminal conduct, or asserted that its technology lacked scientific support, they are defamatory per se and do not require proof of special damages. *Celle*, 209 F.3d at 179.

Therefore, Plaintiff has adequately pleaded that the Defamatory Tweets, a subset of the challenged tweets published by QCM and the Dot Com Defendants, are defamatory. However, Plaintiff has nonetheless failed to state a claim for defamation against any of these defendants because it has failed to adequately plead actual malice.

ii. Actual Malice

Though Plaintiff adequately pleaded that the Dot Com Defendants published a number of defamatory tweets, it failed to adequately plead that they did so with actual malice. As an initial matter, the Court finds that Plaintiff is a limited purpose public figure with respect to simufilam research and therefore is required to plead actual malice. A plaintiff's "status as [a] public or private figure[] determines the standard of fault that [he] must establish to succeed on [his] claims." *Contemporary Mission v. N.Y. Times Co.*, 842 F.2d 612, 617 (2d Cir. 1988). "[A] state cannot award damages to a [public figure] for defamatory statements . . . absent a showing that the statements were published with 'actual malice.'" *Id.* In its ruling in *Gertz v. Robert Welch*, 418 U.S. 323, 352 (1974), "the Court indicated that parties who are not public figures for all purposes may still be public figures with respect to a particular controversy." *Contemporary Mission*, 842 F.2d at 617. To establish that a plaintiff is a limited purpose public figure, "[a] defendant must show the plaintiff has: (1) successfully invited public attention to his views in an effort to influence others prior to the incident that is the subject of litigation; (2) voluntarily injected himself into a public controversy related to the subject of the litigation; (3) assumed a position of prominence in the public controversy; and (4) maintained regular and continuing access to the media." *Id.* (quoting *Lerman v. Flynt Distrib. Co.*, 745 F.2d 123, 136–137 (2d Cir. 1984)); see also *Prince v. Intercept*, 634 F. Supp. 3d 114, 138 (S.D.N.Y. 2022) (finding that it was clear on the face of the pleadings that the plaintiff was a

limited-purpose public figure).

Here, Plaintiff's allegations and exhibits demonstrate that it satisfies all four factors of this test. First, Plaintiff has invited public attention to its views in attempt to influence others for years before Defendants made any allegedly defamatory statements. Plaintiff alleges that it published journal articles and press releases and presented at industry conferences about simufilam and Alzheimer's research. *See, e.g., Biro*, 963 F. Supp. 2d 255, 271 (S.D.N.Y. 2013) (finding the first factor of the test met) ("The very purpose of writing articles in scientific journals, lecturing at universities, and opining in news shows and documentaries is to influence public discourse.") (collecting cases).

Second, Alzheimer's research and the efficacy of drug candidates, and Plaintiff's promotion of novel research on simufilam and its foundations in particular, qualify as "public controvers[ies]" in which Plaintiff voluntarily took part by publishing journal articles and promoting simufilam. *See Chandok v. Klessig*, 648 F. Supp. 2d 449, 458–459 (N.D.N.Y. 2009) (finding that a scientist created a public controversy by publishing articles with novel science in peer-reviewed journals) ("Scientific articles are inherently subject to robust criticism, and for good reason. . . . The controversy, with regard to a published article, extends not only to its direct subject matter and conclusion, but necessarily to the competence and integrity of the author."); *Park v. Capital Cities Commc'ns, Inc.*, 585 N.Y.S.2d 902, 905 (4th Dep't 1992) (finding that a doctor who described himself as a "champion" of novel eye surgery techniques was a public figure for the purposes of a broadcasted surgery); *Winklevoss v. Steinberg*, 96 N.Y.S.3d 561, 562 (1st Dep't 2019) (finding that the plaintiffs were limited purpose public figure because they "voluntarily injected themselves into the world of investing").

Third, Plaintiff assumed a position of prominence in the public controversy about simufilam, as its developer, and in the field of Alzheimer's drug research in general, as a company with a widely known drug candidate, many published studies, and presentations at conferences. *C.f. Biro*, 963 F. Supp. 2d at 275 (finding that the plaintiff assumed a prominent role in the controversy by

positioning himself as a leading expert in the field) (collecting cases). Fourth, Plaintiff maintained regular and continuing access to the media. It alleges that it published journal articles, issued SEC filings, and participated in industry conferences. Its exhibits also demonstrate that it issued a flurry of press releases in response to the allegedly defamatory statements in this case. Accordingly, the pleadings establish that Plaintiff was a limited purpose public figure with respect to simufilam research and is required to plead actual malice in order to survive a motion to dismiss.

Because Plaintiff is a limited purpose public figure, it must plead that each allegedly defamatory statement “was made with actual malice, that is, made ‘with knowledge that it was false or with reckless disregard of whether it was false or not.’” *Church of Scientology Int’l v. Behar*, 238 F.3d 168, 173–174 (2d Cir. 2001) (quoting *Sullivan*, 376 U.S. at 280). “Despite its name, the actual malice standard does not measure malice in the sense of ill will or animosity, but instead the speaker’s subjective doubts about the truth of the publication.” *Id.* at 174. “If it cannot be shown that the defendant knew that the statements were false, a plaintiff must demonstrate that the defendant made the statements with reckless disregard of whether they were true or false.” *Id.* “The reckless conduct needed to show actual malice ‘is not measured by whether a reasonably prudent man would have published, or would have investigated before publishing,’ but by whether there is sufficient evidence ‘to permit the conclusion that the defendant in fact entertained serious doubts as to the truth of his publication.’” *Id.* (quoting *St. Amant v. Thompson*, 390 U.S. 727, 731 (1968)) (citation omitted).

“Although actual malice is subjective, a court typically will infer actual malice from objective facts.” *Celle v. Filipino Reporter Enters.*, 209 F.3d 163, 183 (2d Cir. 2000) (quoting *Bose Corp. v. Consumers Union of United States, Inc.*, 692 F.2d 189, 196 (1st Cir. 1982), *aff’d*, 466 U.S. 485 (1984)). “These facts should provide evidence of ‘negligence, motive and intent such that an *accumulation of the evidence and appropriate inferences* supports the existence of actual malice.” *Id.* (quoting *Bose Corp.*, 692

F.2d at 196) (emphasis in the original).

The Supreme Court found the following factors to be relevant to a showing that the defendant harbored actual malice: (1) whether a story is fabricated or is based wholly on an unverified, anonymous source, (2) whether the defendant's allegations are so inherently improbable that only a reckless person would have put them in circulation, or (3) whether there are obvious reasons to doubt the veracity of the informant or the accuracy of his reports.

Id. (citing *St. Amant*, 390 U.S. at 732).

Plaintiff has failed to adequately plead that the Dot Com Defendants or QCM Defendants published their defamatory tweets with actual malice. Plaintiff makes various assertions in support of either the second or third *Amant* factors: (1) that Defendants and their sources⁴³ were biased against Plaintiff or had a motive to defame Plaintiff, (2) that Defendants did not meet with Plaintiff or certain other knowledgeable people to investigate their concerns before publishing their statements, (3) that Defendants had access to “contradictory information” when they published their statements, (4) that “common knowledge in the scientific community” contradicted Defendants’ beliefs, and (5) that other circumstances, including Plaintiffs’ receipt of grants, publications of its research in peer-reviewed journals, and approval from regulators made Defendants’ statements “inherently improbable.”⁴⁴ Complaint ¶ 347. But the Court finds these assertions unpersuasive. Taken together, Plaintiff’s copious allegations fail to rise to the “accumulation of the evidence and appropriate inferences” necessary to adequately plead actual malice. *Celle*, 209 F.3d at 183.

⁴³ Here, Defendants’ sources for their tweets include the FDA Letters, Dot Com Slides, QCM Report, and the sources on which those publications were based.

⁴⁴ Plaintiff makes several other unpersuasive arguments in support of a finding of actual malice. It asserts that Defendants had “no support” for their accusations, which courts have found may contribute to a plausible inference of actual malice. Third Opposition at 17 (citing *Sbaron v. Time, Inc.*, 599 F. Supp. 538, 584 (S.D.N.Y. 1984)). But this assertion is plainly contradicted by the facts alleged in the Complaint. The support for the allegedly defamatory tweets was the exhaustive research and analysis in the FDA Letters, Dot Com Slide Decks, and QCM Report. Plaintiff also points to Defendants’ repetition and republication of their claims. It is true that under “certain circumstances evidence of a refusal by a publisher to retract a statement after it has been demonstrated to him to be both false and defamatory . . . might be relevant in showing recklessness at the time the statement was published. *Celle*, 209 F.3d at 187 (cleaned up). But here, Plaintiff has not adequately pleaded that Defendants had reason to entertain “serious doubts as to the truth of [their] publication[s],” Defendants’ repetition and republication has limited relevance to the Court’s analysis of actual malice. *Church of Scientology Int’l*, 238 F.3d at 174.

1. Motive and Bias

Plaintiff's allegations of motive and bias provide little if any support for an inference of actual malice. While "it cannot be said that evidence concerning motive . . . never bears any relation to the actual malice inquiry . . . courts must be careful not to place too much reliance on such factors." *Harte-Hanks Commc'ns v. Connaughton*, 491 U.S. 657, 668 (1989) (holding that evidence of a profit motive for the defendant's defamatory statements was insufficient, standing alone, to support a finding of actual malice); *see also Sharon v. Time, Inc.*, 599 F. Supp. 538, 583 (S.D.N.Y. 1984) ("[B]ias on the part of sources does not necessarily create an issue of actual malice.").

Plaintiff claims that Defendants' short positions in Plaintiff's stock gave them an improper motive to make defamatory statements about Plaintiff. But the short positions on their own do not support a showing of actual malice. The short positions could be viewed to support the contrary inference of Defendants' genuine conviction that Plaintiff's stock was overvalued rather than undermine it. While the short position plausibly created a profit motive to publicize the short seller's critiques, that does not lead the Court to infer that they did not subjectively believe those critiques. *See Biro v. Condé Nast*, 963 F. Supp. 2d 255, 278 (S.D.N.Y. 2013) ("[T]he operative question is whether a defendant failed to investigate in the face of actual, *subjective* doubts.") (emphasis added). After all, by shorting the stock, Defendants put their money behind their belief that the stock is overvalued.

Plaintiff also asserts a variety of reasons why Defendants' sources, including Dr. Bredt and various consultants hired by Defendants, may have been biased. Plaintiff asserts that "Dr. Bredt is the named inventor on a neurobiology patent that *may* compete with Cassava . . ." and that "Dr. Bredt has also been affiliated with companies . . . that directly compete with Cassava." Complaint ¶ 385 (emphasis added). Such tenuous allegations are insufficient to raise an inference that at the time he published his statements, Defendant Bredt stood to personally benefit from the depreciation

of Plaintiff's stock or that he harbored bias against Plaintiff, and therefore they have little bearing on the Court's analysis of actual malice. For the same reason, Plaintiff's allegations that some of Defendants' sources acted as consultants for "competitor" drug pharmaceutical companies at unspecified times also does not raise an inference that they had a bias against Plaintiff when they provided their critiques of Plaintiff's research. *Id.* Plaintiff also alleges that "one or more" of the donors to a website run by one consultant, Dr. Bik, that is funded by reader donations and that investigates scientific fraud "is a Defendant, affiliated with a Defendant, and/or affiliated with other short sellers of Cassava stock." *Id.* Plaintiff does not plead that Dr. Bik was aware of the donation or the donor's identity, and this allegation is too vague to raise an inference of bias. Moreover, "biases do not establish actual malice without additional facts to suggest the speaker acted pursuant to that bias." *McDougal v. Fox News Network, LLC*, 489 F. Supp. 3d 174, 185 (S.D.N.Y. 2020) (citing *Palin v. N.Y. Times Co.*, 940 F.3d 804, 814 (2d Cir. 2019)). Plaintiff does not allege such facts here. Accordingly, Plaintiff's allegations do not suffice to support an inference of actual malice.

2. Failure to Investigate

Plaintiff's allegations that Defendants did not raise their concerns with Plaintiff's board, executives, scientists, or employees before airing their concerns publicly also provide scant support for an inference of actual malice.⁴⁵ "[P]urposeful avoidance of the truth" can support a finding of actual malice. *Harte-Hanks*, 491 U.S. 657, 692 (1989). But "failure to investigate before publishing,

⁴⁵ Plaintiff also alleges that Defendants failed to consult with an "independent researcher" at Yale University who "published test results showing biological activity for simufilam." Complaint ¶ 350. The Court infers that researcher authored the study titled "Filamin A Inhibition Reduces Seizure Activity In a Mouse Model of Focal Cortical Malformations." Complaint ¶¶ 311, 350. That study is also attached to the Complaint as an exhibit. Dkt. No. 37-10. While the Court has reviewed the study—without the benefit of any guidance from Plaintiff about which particular portions or conclusions of the study are relevant to its claims—the Court could not determine that any of the conclusions of the study contradicted Defendants' claims. The study found that inhibiting filamin A reduced seizure activity in mice, not that simufilam or inhibition of filamin A was effective at treating Alzheimer's in humans. The Court also notes that Dr. Burns is listed as an author on the allegedly "independent" study. It is unclear precisely what Plaintiff means by "showing biological activity for simufilam," or why that finding would have conflicted with Defendants' beliefs such that Defendant might have seen any benefit in consulting with the researcher.

even when a reasonably prudent person would have done so, is not sufficient to establish reckless disregard.” *Id.* Accordingly, courts have found that a plaintiff “cannot establish actual malice on the basis that . . . [a] defendant[] declined to consider plaintiff[’s] account of the events.” *Hodges v. Lutwin*, No. 22-974, 2023 WL 3362836, at *4 (2d Cir. May 11, 2023) (collecting cases).

By the time Defendants published the Defamatory Tweets, Defendants had already had the opportunity to consider Plaintiff’s account. The tweets began in November of 2021. *See* Appendix A at 2. By that time, Plaintiff had issued multiple press releases denying wrongdoing or data errors in response to the FDA Letters. In its FDA Letter, the Dot Com Defendants also explicitly invited Plaintiff to respond to dozens of questions to allay their concerns, and Plaintiff does not allege that it did. Finally, Plaintiff’s pleadings and the documents incorporated into their pleadings describe the intensive investigations that Defendants undertook to develop the QCM Report, Dot Com Slide Decks, and FDA Letters, which describe the bases for the beliefs expressed in the challenged tweets. Plaintiff alleges that QCM consulted with multiple scientists to create the QCM Report, and the QCM Report, Dot Com Defendants’ Slide Decks, and FDA Letters, incorporated into the Complaint, themselves contain extensive research. *See Church of Scientology Int’l v. Behar*, 238 F.3d 168, 174 (2d Cir. 2001) (finding that a defendant’s extensive investigation cut against a finding of actual malice). Therefore, Plaintiff has failed to raise a plausible inference of an insufficient investigation, let alone purposeful avoidance of the truth.

3. Contradictory Information

Plaintiff’s allegations that Defendants had access to information that “contradicted” the challenged tweets or the sources on which those challenged tweets were based similarly do not support an inference of actual malice. Plaintiff claims that its SEC filings and press releases “contain information contradicting Defendants’ false and defamatory statements.” Complaint ¶¶ 303–305. But a finding of actual malice “cannot be predicated on mere denials, however vehement; such

denials are so commonplace in the world of polemical charge and countercharge that, in themselves, they hardly alert the conscientious reporter to the likelihood of error.” *Edwards v. Nat’l Audubon Soc’y*, 556 F.2d 113, 121 (2d Cir. 1977); *see also Baiul v. Disson*, 607 F. App’x 18, 21 (2d Cir. 2015) (finding that such denials provide “limited” circumstantial evidence of actual malice). Denials are of especially limited value in this case, given that Defendants expressed concerns that Plaintiff may be engaging in a years-long pattern of coordinated dishonesty.

Plaintiff’s allegations that other members of the scientific community published statements disagreeing with Defendants’ sources for the Defamatory Tweets also do little to support an inference of actual malice on these facts. That is because nearly all of the contrary statements referenced in the Complaint were published after Defendants articulated their critiques of Plaintiff’s work.⁴⁶ Plaintiff alleges that the Dot Com Defendants registered the domain names cassavafraud.com and simuflimflam.com in late October 2021 and that QCM published the QCM Report in November 2021. Plaintiff points only to one statement before late October 2021, a blog post by a researcher who voiced disagreement with the Neuroscientist Defendants’ first FDA Letter. Even assuming that Defendants were aware of that statement before they first expressed the claims underlying the defamatory tweets, one or two contrary opinions would have been insufficient to cause Defendants to “serious[ly] doubt,” or doubt at all, their beliefs. *St. Amant*, 390 U.S. at 731. This is particularly true given the number of Defendants in this case, in addition to multiple consultants, who claimed to have come to the same conclusions. That Defendants continued to express those same beliefs, including in the Defamatory Tweets, after the other contrary opinions referenced in the Complaint were published, is insufficient to support an inference of actual malice.

Plaintiff also claims that Defendants had knowledge of published articles by other scientists “containing accurate information regarding the foundational science for the role of filamin protein

⁴⁶ Some of the alleged statements are undated. *See* Complaint ¶ 364.

in disease.” Complaint ¶ 311. But Plaintiff does not allege that the conclusions of those articles directly conflicted with any of the inferences or opinions contained in tweets or in the FDA Letters, Dot Com Slide Decks, QCM Report. Plaintiff alleges only that those studies “demonstrate[] a link between filamin A links and neurodegeneration, such as Alzheimer’s disease” or “contain[ed] accurate information regarding the foundational science for the role of filamin protein in disease.” Complaint ¶¶ 178, 311. The Court observes that only one of the studies listed and attached as an exhibit to the Complaint tested simufilam,⁴⁷ and many did not draw conclusions about Alzheimer’s, filamin A, or either one. Defendants’ statements focused specifically on what they claimed were anomalous methodologies and results in Plaintiff’s, Dr. Wang’s, and Dr. Burns’ studies. Defendants then posited that as a result of these alleged anomalies, Plaintiff’s claims about simufilam, as well as the link between Alzheimer’s and filamin A, were unreliable. Therefore, Plaintiff has failed to raise a plausible inference that the other studies it references conflicted with Defendants’ beliefs.

Plaintiff’s allegations that Defendants had knowledge of articles published by other scientists that “followed a method similar to that used to test simufilam, including the use of post-mortem brain tissue,” similarly are afforded little weight. Complaint ¶ 314. Defendants did not state that the use of post-mortem brain tissue was an inherently unreliable methodology. They stated that the particular results that Plaintiff, Dr. Wang, and Dr. Burns claimed to obtain from the particular post-mortem brain tissue methodologies they used in their studies were suspect. Plaintiff does not allege that the scientists who conducted those other studies claimed to obtain the same type of results, or

⁴⁷ The Court infers that the study titled “Filamin A Inhibition Reduces Seizure Activity In a Mouse Model of Focal Cortical Malformations” is the study Plaintiff refers to elsewhere in the Complaint as having been conducted by an “independent researcher” at Yale University and which “show[s] biological activity for simufilam” Complaint ¶¶ 311, 350. That study is also attached to the Complaint as an exhibit. Dkt. No. 37-10. While the Court has reviewed the study—without the benefit of any guidance from Plaintiff about which particular portions or conclusions of the study are relevant to its claims—the Court could not determine that any of the conclusions of the study contradicted Defendants’ claims. The study found that inhibiting filamin A reduced seizure activity in mice, not that simufilam or inhibition of filamin A was effective at treating Alzheimer’s in humans. The Court also notes that Dr. Burns is listed as an author on the allegedly “independent” study.

even that they used the precisely the methods that Defendants questioned.⁴⁸ Accordingly, the Court affords little weight to Plaintiff's allegations regarding allegedly contradictory information.

4. Common Knowledge in the Scientific Community

Plaintiff's allegations of common knowledge in the scientific community does not support an inference of actual malice analysis in this case. The crux of most of Plaintiff's allegations related to common knowledge is that Defendants knew that many of the alleged anomalies that they observed did not necessarily indicate data manipulation or errors. But an allegation that Defendants were aware of alternative explanations for some of their observations does not make the explanation at which they arrived "inherently improbable," nor would it cause "serious doubt." *St. Amant*, 390 U.S. at 731–732. This is particularly true given that Defendants purported to base their conclusions not on a single isolated anomaly, but on an alleged constellation of irregularities in results and suspect methodologies across many studies.

Plaintiff's remaining allegations of "common knowledge" relate to the widely accepted use of certain post-mortem brain tissue methodologies in neurology experiments. For instance, Plaintiff assert that "it was (and is) common knowledge in the scientific community that conducting tests on post-mortem human brain tissue that has been frozen and thawed is a well-published, accepted form of scientific inquiry." Complaint ¶ 324. But as previously described, Defendants did not claim that the use of post-mortem, frozen, or matched pairs of brain tissue are inherently unreliable methodologies. Their claims were more nuanced. They asserted that the particular results that Plaintiff, Dr. Wang, and Dr. Burns claimed to obtain from the particular brain tissue methodologies

⁴⁸ Again, Plaintiff alleges only that the method was "similar." Complaint ¶ 192. To the extent that Plaintiff attached dozens of studies to the Complaint with the expectation that the Court would compare the methodologies used by Dr. Burns, Dr. Wang, and Plaintiff to the methodologies used by other scientists and determine whether the latter conflicted with Defendants' critiques—particularly when the Complaint does not direct the Court to any specific sections of the articles—the Court agrees with Judge Wang's conclusion that Plaintiff's pleadings violate Fed. R. Civ. P. Rule 8(a). *See* First R&R at 22-23. Hundreds of pages of attachments, many of which are written in highly technical, specialized language rather than for a lay audience, fail to meet the standard of either "short" or "plain." Fed. R. Civ. P. 8(a).

they used in their studies were suspect. For instance, the FDA Letters stated that “[t]he complex, multi-step cellular processes the authors claim to observe in tissue that has been dead for a decade are contrary to a basic understanding of neurobiology” and that “[i]t is unlikely that the enzyme responsible for phosphorylation would survive the initial -80°C freezing step.” Complaint ¶ 189. Because the common knowledge Plaintiff alleges does not directly contradict Defendants’ purported beliefs, it does not raise a plausible inference that Defendants’ statements were “inherently improbable.” *St. Amant*, 390 U.S. at 732.

5. Other Circumstances

Finally, Plaintiff claims that a number of other circumstances made Defendants’ beliefs “inherently improbable.” Complaint ¶ 347. Plaintiff alleges that Cassava raised hundreds of millions of dollars, won research grants, survived scrutiny by regulatory agencies, and published its studies in peer-reviewed journals. It asserts that none of this would have been possible had it manipulated data or made false claims about simufilam.⁴⁹ It also asserts that “Cassava’s foundational science and testing results would have been called out as fabricated, manipulated, and doctored a long time ago and prior to Defendants initiating their disinformation campaign if they had been fabricated, manipulated, and doctored.” Complaint ¶ 353. But scientific fraud that dupes funders, regulatory agencies, and academic journals is, sadly, not unheard of. That other organizations and individuals may have failed to raise Defendants’ concerns earlier—particularly given that Defendants’ scrutiny of Plaintiff came shortly after Plaintiff announced clinical trial results that Plaintiff itself labeled as aberrant and a subsequent reanalysis—does not raise a plausible inference

⁴⁹ Plaintiff also alleges that an independent researcher “published test results showing biological activity for simufilam” and that “Cassava’s foundational science and testing results could not have shown biological activity at an outside independent lab at Yale University if Cassava was a fraud relying on fabricated research and testing results.” Complaint ¶ 350. It is unclear precisely what Plaintiff means by “showing biological activity for simufilam.” In any event, Defendants did not state that simufilam did not “show[] biological activity.” They stated that Plaintiff had manipulated its data and that its claims about simufilam’s efficacy in treating Alzheimer’s were unreliable.

that Defendants' accusations were "inherently improbable." *St. Amant*, 390 U.S. at 732; *Cf. Kesner v. Dow Jones & Co., Inc.*, No. 22-875, 2023 WL 4072929, at *3 (2d Cir. June 20, 2023) (finding that accusations were not inherently improbable "merely because others, including the SEC, had not directly accused [the plaintiff].").

Plaintiff also claims that the actions taken by Plaintiff and its executives are inconsistent with a fraudulent scheme. Plaintiff alleges that "Cassava opened its testing results to scrutiny and review in good times and bad," that Cassava's executives made "personal investments in Cassava," and that "Cassava's executives could have but did not sell any of their shares in Cassava for over a decade." Complaint ¶¶ 352, 355–356. But these allegations also fail to raise a plausible inference that Defendants' beliefs were "inherently improbable." *St. Amant*, 390 U.S. at 732. Plaintiff's publication of press releases and articles about results does not make Defendants' assertions inherently improbable. Nor does the fact that executives held onto their company stock as the price rose.

Plaintiff has failed to adequately plead either that Defendants' statements were "so inherently improbable that only a reckless person would have put them in circulation" or that there were "obvious reasons to doubt the veracity" of Defendants' sources. *St. Amant*, 390 U.S. at 731–732. Each of Plaintiff's allegations in support of actual malice either contributes only marginally to a plausible inference of actual malice or does not contribute to such an inference at all. Therefore, the Court cannot plausibly infer that Defendants published their tweets with actual malice.

6. Open Label Study Statements

In contrast to its response to the allegedly false statements accusing Plaintiff of data fabrication and false claims about simufilam, Plaintiff devotes scant briefing to the Dot Com Defendants' allegedly false statements that the Open Label study was not double-blind. Plaintiff has also failed to adequately plead actual malice with respect to those statements.

Plaintiff makes several allegations relevant to this analysis: first, that the Dot Com

Defendants held short positions in Plaintiff's stock, second, that Plaintiff publicly claimed that its Open Label Study was double-blind, and third, that the Dot Com Defendants did not interview Plaintiff, Plaintiff's executives, or Plaintiff's scientists about Defendants' suspicions. But as discussed above, Defendants' alleged short positions do not by themselves raise a plausible inference of actual malice. Also as discussed, allegations of failing to heed Plaintiff's public denials or seek out Plaintiff's side of the story are insufficient to adequately plead actual malice. *See Edwards*, 556 F.2d at 121. Therefore, Plaintiff has failed to plead actual malice with respect to the statements about the Open Label Study and has failed to state a claim for defamation.

V. LEAVE TO AMEND

Judge Wang did not make a recommendation regarding whether Plaintiff should be granted leave to amend the Complaint, but the Court holds that it should be granted leave to amend in part. "It is the usual practice upon granting a motion to dismiss to allow leave to replead." *Cortec Indus., Inc. v. Sum Holding L.P.*, 949 F.2d 42, 48 (2d Cir. 1991); see also Fed. R. Civ. P. 15(a)(2) ("The court should freely give leave [to amend] when justice so requires."). It is true that leave to amend may be denied "for good reason, including futility, bad faith, undue delay, or undue prejudice to the opposing party." *TechnoMarine SA v. Giftports, Inc.*, 758 F.3d 493, 505 (2d Cir. 2014) (quoting *McCarthy v. Dun & Bradstreet Corp.*, 482 F.3d 184, 200 (2d Cir. 2007)).

The Court concludes that any amendment of Plaintiff's claims regarding the FDA Letters, QCM Report, and Dot Com Slide Decks would be futile. The Court has already had the opportunity to examine those challenged statements in their full contexts and has determined that they are not actionable, with the exception of the statements in the Seeing through the Blind Deck regarding the Open Label study. Therefore, the Court does not grant Plaintiffs leave to amend with respect to those claims.

However, the Court cannot conclude that amendment of the Complaint to replead Plaintiff's

claims with respect to the challenged tweets would be futile. Plaintiff challenged hundreds of tweets but provided few individualized allegations regarding the context of each tweet. Additionally, the Court cannot conclude that it would be futile for Plaintiff to replead its allegations of actual malice with respect to the challenged tweets and the challenged statements in the Seeing through the Blind Deck regarding the Open Label Study.


Plaintiff has not yet had the opportunity to amend the Complaint with the benefit of a ruling from the Court on those issues. “Without the benefit of a ruling, many a plaintiff will not see the necessity of amendment or be in a position to weigh the practicality and possible means of curing specific deficiencies.” *Loreley Fin. (Jersey) No. 3 Ltd. v. Wells Fargo Sec., LLC*, 797 F.3d 160, 190 (2d Cir. 2015). Plaintiff is therefore granted leave to file an amended complaint with respect to these deficiencies. Any amended complaint must be filed and served no later than 30 days from the date of this order.

VI. CONCLUSION

For the foregoing reasons, Defendants’ motions to dismiss the claims against them are GRANTED. Plaintiffs’ claims against all of the defendants are dismissed without prejudice. The Clerk of Court is directed to terminate the motions pending at Dkt Nos. 74, 77, and 86.

SO ORDERED.

Dated: March 28, 2024
New York, New York



GREGORY H. WOODS
United States District Judge

EXHIBIT A

	Date	Author	Statement	Link
1	11/2/2021	Adrian Heilbut	Not as crazy as photoshopping all of your studies for 20 years.. and putting a molecule into humans based on nonsense. \$SAVA	https://twitter.com/Adrian_H/status/1455654387691540486
2	11/2/2021	Jesse Brodtkin	Wait, I'm confused, so there is no \$sava deal? But some rando on Reddit said the drug works and Pfizer wants to put into phase 7 right away. 🤔🤔🤔. Jk no one with an ounce of scientific sense would touch this turd []	https://twitter.com/jesse_brodtkin/status/1455726370441551876
3	11/3/2021	Adrian Heilbut	Here's a little tip for biotech frauds trying to obscure information about what proteins you actually measure to make your wacky, miraculously accurate Alzheimer's diagnostic more inscrutable: the labels are still there in the PDF even if you make the text white. \$SAVA	https://twitter.com/Adrian_H/status/1456096491248963588
4	11/3/2021	Jesse Brodtkin	send in ADscience while you do your thing. We need some opposition, it's no fun just yelling \$sava is a fraud without any pushback 🤔 (not that there is any real argument at this point 🤔)	https://twitter.com/jesse_brodtkin/status/1456010324772069381
5	11/3/2021	Jesse Brodtkin	which? Why are we trying to stop them? Because they are taking advantage of desperate people to perpetrate a scam and depriving them of the opportunity to participate in something that might help. And taking lots of innocent naïve rubes' money along the way. That's why, \$sava f	https://twitter.com/jesse_brodtkin/status/1456015331839909896
6	11/3/2021	Jesse Brodtkin	Everyone in the biotech industry knows \$sava is a scam, we are just the only ones who put the effort into putting it on paper. This stock is chat room dupes and dumb money generalist funds.	https://twitter.com/jesse_brodtkin/status/1456076765307277314
7	11/4/2021	Adrian Heilbut	If you put a doctored / made up western blot into an NIH grant application, could that cause any issues with @HHS_ORI or lead to a False Claims case? \$SAVA	https://twitter.com/Adrian_H/status/1456121036802494468
8	11/4/2021	Adrian Heilbut	SavaDX is worthless. We already knew that, but this confirms it. Also, how was \$SAVA ever planning to commercialize a regulated diagnostic assay when they have no IP?	https://twitter.com/Adrian_H/status/1456245676082405377
9	11/4/2021	Adrian Heilbut	It is all complete, made-up garbage. If it were not, \$SAVA would be earnestly and openly defending everything in a transparent scientific way.. everything about how they operate is about contriving the appearance of desirable results.	https://twitter.com/Adrian_H/status/1456275948693770240
10	11/4/2021	Enea Milioris	Well well well... \$SAVA miracle 98% accuracy diagnostic for AD is just fluff?!?! shocked i tell ya	https://twitter.com/DRnotaDR/status/1456251010180075520
11	11/4/2021	Jesse Brodtkin	I will NEVER cover \$sava . Simufilam is a frauud!	https://twitter.com/jesse_brodtkin/status/1456272096053526550
12	11/4/2021	Jesse Brodtkin	I will NEVER cover \$sava . Simufilam is a frauud!	https://twitter.com/jesse_brodtkin/status/1456272096053526550
13	11/4/2021	QCM	The situation was NOT rectified as there was no close out letter from the FDA. Those letters ARE rare (roughly 1% of inspections results in one warning). Evidence that IMIC is incompetent in running trials and you have yourself why SAVA chose them	https://twitter.com/QCMFunds/status/1456224650107756548
14	11/4/2021	QCM	That the SAVA study was bad doesn't mean that all the studies IMIC does are bad. But given what we shared about that clinic you must be either in bad faith or you haven't read the report	https://twitter.com/QCMFunds/status/1456241263708094471
15	11/5/2021	Adrian	The lies from \$SAVA never end	https://twitter.com/Adrian_H/status/1456776594366869508
16	11/5/2021	Jesse Brodtkin	\$sava's SavaDX is not only silly useless nonsense, but is now worth \$0. Fun read from ♂ Adrian	https://twitter.com/jesse_brodtkin/status/1456570615482175488
17	11/6/2021	Jesse Brodtkin	Either \$sava has been lying to us for months about having the blots or they submitted faked evidence to the Journal of Neuroscience. Pick one.	https://twitter.com/jesse_brodtkin/status/1456934307558301697
18	11/7/2021	Jesse Brodtkin	Never \$sava is a total fraud. \$2 in 3 years max guaranteed.	https://twitter.com/jesse_brodtkin/status/1457490360402391044
19	11/9/2021	QCM	Marc thank you for your invaluable support. Beyond all the nonsense, we did succeed to shine a spotlight and to explain, to whoever is willing to listen, what's truly going on with this company. The ultimate consequences for \$SAVA are UNAVOIDABLE, though timing is uncertain.	https://twitter.com/QCMFunds/status/1457975468418818048

	Date	Author	Statement	Link
20	11/10/2021	Adrian Heilbut	therein lies Remi's strategic genius in concocting his own secret, fake new biomarker with which to bootstrap Simuflimflam	https://twitter.com/Adrian_H/status/1458353805045735424
21	11/10/2021	Jesse Brodtkin	\$sava Wang is not taking a break from his fraud-spree for CTAD. He's hard at work getting off-the-shelf antibodies to change their binding properties, but it only works in HIS hands (ya know like the P2 re-do 🤔). (that's in your J Neurosci @MarinaP63 @SfNJournals 🙄 🔗 📄)	https://twitter.com/jesse_brodtkin/status/1458423337621893132
22	11/11/2021	Adrian Heilbut	One can quantify in the original image w/ ImageJ. Here's a quick "plot profile" showing mean intensity of each vertical line in the selected region in background, scanning from left to right. Distribution shifts in the extra piece they added. It's 100% faked. \$SAVA @MarinaP63 Similar sharp difference in the mean background level with a "vertical profile" going from top down into the "original" image. 100% faked. Not cool, \$SAVA. @MarinaP63 #SfN2021 #CTAD2021 The lawsuits and criminal cases based on this \$1.5B stunt are going to be 💧 \$SAVA and as others have pointed out, it is obvious that none of these are images of real, complete western blots in any case, because there is no lane with molecular weight markers (or empty lane where they would be if they aren't labeled for imaging) IT IS ALL MADE UP	https://twitter.com/Adrian_H/status/1458681850843574273
23	11/11/2021	Adrian Heilbut	Just to be clear: \$SAVA faked additional "raw" data last week, sent it to @MarinaP63 at J Neurosci to receive their "blessing", halted the stock, then sent a press release relating this false, engineered news, causing the share price to double. Is there a legal term for that?	https://twitter.com/Adrian_H/status/1458780796005892097
24	11/11/2021	Jesse Brodtkin	🔗 Get your daily \$SAVA fraud here 📄 It appears that in an effort to clear themselves of manipulated image accusations Cassava submitted some (long pause) MANIPULATED IMAGES.. I know right 🤔 🔗 📄 imagine the cajones and contempt that takes 📄	https://twitter.com/jesse_brodtkin/status/1458771009813815300
25	11/11/2021	Jesse Brodtkin	thanks for your concern, but no. I don't want to help perpetuate the \$sava scam of investors and families with AD	https://twitter.com/jesse_brodtkin/status/1458899214101057538
26	11/12/2021	Jesse Brodtkin	that would be the behavior of a science-based company. \$sava will only be mildly (and misleadingly in the recent example) responsive when their stock price drops. That's because sava is a stock price scam and not a drug company (you can see it right in their compensation scheme)	https://twitter.com/jesse_brodtkin/status/1459157554412544005
27	11/14/2021	Jesse Brodtkin	I'm expecting: Cassava has been served with subpoenas for information related criminal fraud by the SEC and that Remi has retained legal representation and has temporarily been placed on leave 📄	https://twitter.com/jesse_brodtkin/status/1459943407892193288
28	11/14/2021	Adrian Heilbut	The privilege to conduct trials under an IND is based on a balance of safety and potential for efficacy. If \$SAVA pre-clinical and clinical data are fabricated or manipulated, or trials not properly run, there is no ethical or regulatory justification for further clinical trials. We know IT WILL fail because we see and understand that the biology was MADE UP. It is not a matter of hope, or optimism, or liking what one sees — it is all fabricated nonsense. If you cannot understand or admit this to yourself by now, you are going to be Remi's bagholder.	https://twitter.com/Adrian_H/status/1460054040545566727
29	11/15/2021	Jesse Brodtkin	\$sava also dropping SavaDx development for now, which makes sense because not only is it BS, but this trade secret isn't a secret anymore 🤔 (h/t @Adrian_H) p.s. publishing p2 data looking pretty iffy as well.	https://twitter.com/jesse_brodtkin/status/1460263582151630848

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30	11/15/2021	Jesse Brodtkin	Agree on that speculation. That would fertile ground and probably the most appropriate venue in which to begin the investigation into \$sava (honestly there are several oversight offices that could have fruitful and concurrent investigations)	https://twitter.com/jesse_brodtkin/status/1460272152473747466
31	11/16/2021	Adrian Heilbut	2005 was the foundation for 2008, 2012, 2017, and the \$SAVA Simufilam IND, the Phase 2 trials, and SavaDX. It is all fabricated nonsense, built upon other fabricated nonsense, and it is all going to come crashing down. \$SAVA is perfectly happy to light NIH and investor money on fire so long as they manage to siphon off a large chunk of it for themselves	https://twitter.com/Adrian_H/status/1460700822279532546
32	11/16/2021	Adrian Heilbut	Everything comes back to the absurd (and falsifiable) \$SAVA claim of Naloxone binding to Filamin-A and that pentapeptide with sub-nanomolar affinity. So those early papers are intensely relevant.	https://twitter.com/Adrian_H/status/1460707518175399940
33	11/16/2021	Adrian Heilbut	Yes, based on what's plain to see over 25+ papers, Dr. Wang's entire career and all his key findings are based on scientific fraud & fabrication. Whether Dr. Burns & \$SAVA were complicit at the time or just fooled, I don't know. They are complicit in covering up the truth now.	https://twitter.com/Adrian_H/status/1460712095062925314
34	11/16/2021	Jesse Brodtkin	Ha, you give me too much credit. There was never a deal. There isn't even a company, you have the femtomolar lie generated by Wang inside the \$sava patent. You are never getting away from that, even if Remi the fraudster happened to stumble on the cure (he didn't).	https://twitter.com/jesse_brodtkin/status/146067733921185801
35	11/17/2021	Adrian Heilbut	this is just the start.. the whole \$SAVA charade is going to unravel now cc: @MarinaP63 and I have no doubt that the SEC is going to investigate the stunt \$SAVA pulled two weeks submitting additional fabricated data in a fake "Erratum" to fool the Journal of Neuroscience into issuing a statement of "exoneration" the Ph2 clinical data is very much in doubt here too. I agree that this is a rare or unprecedented situation.. typically when something like this happens, the sponsor admits it and stops the trial themselves.	https://twitter.com/Adrian_H/status/1460978798439157765
36	11/17/2021	Jesse Brodtkin	\$sava this is just the beginning, CUNY will find Wang has been crooked for a long time, Remi has prob been cherry-picking clinical data, the patent is totally invalid and based on Wang, Remi likely been insider trading via social media, 8-k and 10-q are full of misinformation etc	https://twitter.com/jesse_brodtkin/status/1460977313877798913
37	11/17/2021	Jesse Brodtkin	So will CUNY circle the wagons around \$sava fraud Wang with the SEC looking over their shoulder? (I'm guessing they won't) No Wang=No Patent=No Company=\$0/share	https://twitter.com/jesse_brodtkin/status/1461003095282966532
38	11/17/2021	Jesse Brodtkin	Is \$sava behavior consistent with knowingly falsifying data? ☹️	https://twitter.com/jesse_brodtkin/status/1461122801352515587
39	11/17/2021	Jesse Brodtkin	This would be a good path forward for \$sava the problem is without Remi's conning skills there is no value to the company and the board knows it.	https://twitter.com/jesse_brodtkin/status/1461130312730255361
40	11/17/2021	QCM	\$SAVA couldn't have put together this circus without assistance from multiple people and entities. You are either with us or with Cassava. If you have been unknowingly part of this deception, I suggest you resign immediately before we start calling you out individually.	https://twitter.com/QCMFunds/status/1461039592325492740
41	11/18/2021	Adrian Heilbut	I mean, it would really be a pain in the ass for @MGHNeurology @MGHNeuroSci if it turned out they were directly receiving NIH money to help run a fraudulent study with \$SAVA on Alzheimer's biomarkers. They'd probably want to try to stay ahead of possible scandals like that. Just my usual \$SAVA speculation, of course, it's not as if we already have all the receipts[6]	https://twitter.com/Adrian_H/status/1461388129747849224
42	11/18/2021	Adrian Heilbut	I have no idea, but if someone was looking for people lying to pump in order to sell, the first logical place to check for liars would be \$SAVA management.	https://twitter.com/Adrian_H/status/1461543350587338754

	Date	Author	Statement	Link
43	11/19/2021	Enea Milioris	How is it legal for \$SAVA to spinal tap folks and then just make up their biomarker values?	https://twitter.com/DRnotaDR/status/1461663337066995719
44	11/19/2021	Jesse Brodtkin	To stop a sociopath from defrauding investors and harming elderly sick people and their families \$sava	https://twitter.com/jesse_brodtkin/status/1461842547349860355
45	11/19/2021	QCM	Here is what \$SAVA's management seems to be trying to hide from you...	https://twitter.com/QCMFunds/status/1461814029018611717
46	11/19/2021	Adrian Heilbut	Between Harvard/MGH, Hopkins, and Yale, the NIH grants flowing to and around this "network", obvious evidence of scientific misconduct, and clear yet undisclosed conflicts of interest, more people might start paying attention to what has been going on here soon. \$SAVA	https://twitter.com/Adrian_H/status/1461757239719514117
47	11/21/2021	Adrian Heilbut	At which part of this process were \$SAVA management looking at the data post hoc and choosing which different patients to remove from each analysis and different endpoint?	https://twitter.com/Adrian_H/status/1462482259097833475
48	11/21/2021	Adrian Heilbut	The cognition data were not the basis for considering the Ph2 "successful" and justifying doing a Ph3. Cognition was a purely a marketing stunt to sell the stock. The actual endpoint of the Ph2 were the biomarkers, because \$SAVA knew those could be faked by the great Wang.	https://twitter.com/Adrian_H/status/1462483419124932613
49	11/21/2021	Adrian Heilbut	The whole \$SAVA strategy, which was quite clever, is to keep pushing ahead to the next step using data that can be faked, and then moving the perceived goalpost to something else while trying to let bygones be bygones. It's a house of cards, in the process of collapsing.	
50	11/21/2021	Jesse Brodtkin	\$sava also has a completely bogus device: SavaDX. Same ridiculous claims (100% accuracy), same opaque "validation", same cultish following. Good comparison to Theranos. Protego has nothing to do with filamin or simufilam, but yeah they are both companies in biopharma ☐	https://twitter.com/jesse_brodtkin/status/1462470738703749125
51	11/21/2021	Jesse Brodtkin	Allowing an obvious fraud like \$sava to continue to take advantage of patients, investors and families makes a mockery of our regulatory framework and markets. 50:50 Remi ends up behind bars.	https://twitter.com/jesse_brodtkin/status/1462490125494099968
52	11/21/2021	QCM	Just as the "independent" lab ended up being Wang's, it's legitimate to assume that these two statisticians may not be as independent. Given the precedents, the burden of proof should be in \$SAVA. And the fact that their names haven't yet been made public stinks to high heaven	https://twitter.com/QCMFunds/status/1462480904010575875
53	11/21/2021	QCM	Given that they have been caught lying multiple times (e.g. Remoxy approval, independent lab) burden of proof must be on \$SAVA, especially given the absurd changes in baseline highlighted multiple times and detected by Dr. Carlisle (expert in statistical fraud detection)	https://twitter.com/QCMFunds/status/1462487679287889923
54	11/23/2021	Jesse Brodtkin	For those of you that may have been confused by @SfNJournals decision to actively participate in fraud by exonerating \$sava and surrendering their scientific integrity and voice to Remi, I put a helpful explainer here 🗨️ cc: @MarinaP63 @JuanLermal @barry_everitt @SECEnfDirector	https://twitter.com/jesse_brodtkin/status/1463129101821255681
55	11/24/2021	Adrian Heilbut	Dr. Bik is exceedingly polite & fighting a much bigger war against misconduct across all of science. Given the evidence here, it is 100% clear that Dr. Wang is a fraud who has been fabricating data for 20 years. It may not be nice to say, but every one of you can see it. \$SAVA	https://twitter.com/Adrian_H/status/1463556887442558983
56	11/24/2021	Adrian Heilbut	I'm not assuming anything. The statement put out by JN was patently ridiculous. The "original" blot provided in the Erratum was faked. They need to explain or correct their statement and Erratum, and explain the process that that led to it. @MarinaP63 \$SAVA	https://twitter.com/Adrian_H/status/1463562262694842372

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57	11/24/2021	Adrian Heilubt	The whole Bordey / TSC / Yale thing is bizarre (especially the patent applications), but it's a sideshow. None of their work has ever established or validated *anything* about Simuflimflam mechanism (in AD or otherwise) or binding to FLNA.	https://twitter.com/Adrian_H/status/1463571837242290178
58	11/25/2021	Adrian Heilbut	This is an amazing story from @jflifer .. (and it went down at Yale, no less!) \$SAVA There's always an attempt at a cover-up, and it doesn't work in the end..[7] @MarinaP63 https://muse.jhu.edu/article/839285 what is it with fraudsters and binding curves? \$SAVA	https://twitter.com/Adrian_H/status/1463770157650690058
59	11/26/2021	Jesse Brodtkin	Are you a scientist using you real name that doesn't think \$sava is a scam? You could be the founding member, claim your prize ☐	https://twitter.com/jesse_brodtkin/status/1464242161289941002
60	11/26/2021	Jesse Brodtkin	She heard an enticing story (simuflam binds flna with cosmic potency) saw how it could easily fit into her life's work and got excited. She didn't think to double-check, she trusted Sava wouldn't be lying (most people in science are not incorrigible liars like Remi). Sad really	https://twitter.com/jesse_brodtkin/status/1464415894411612166
61	11/30/2021	Adrian Heilbut	CUNY has no obligation to protect other people's information If \$SAVA want to protect their "trade secrets" maybe they should have built their own lab and hired scientists instead of playing games with academic "consultants" It's all a cosplay joke anyway; there's no real test Why not focus on the real issue: SavaDx is a fraud and the western blots on that poster presented as "SavaDx" are not what they are claimed to be. \$SAVA	https://twitter.com/Adrian_H/status/1465751974998069248
62	11/30/2021	Adrian Heilbut	The truth about \$SAVA SavaDx is that is a FAKE assay, the only purpose of which is to provide "confirmation" of the "treatment effects" of \$SAVA's inert drug that does not and cannot bind Filamin-A Remi is a special kind of genius. https://cassavafraud.com/docs/SAVADx_Theranos2.0.pdf	https://twitter.com/Adrian_H/status/1465870478527057920
63	11/29/2021	Enea Milioris	A Western Blot-based blood diagnostic with unprecedented accuracy is the Flintstones' Theranos \$SAVA	https://twitter.com/DRnotaDR/status/1465412191830654982
64	11/30/2021	Jesse Brodtkin	It meshes up perfectly, everything except the numbers. Date, patient ID, MW, antibody, collaborator, technique... just not the result 🤔 ergo \$sava lies	https://twitter.com/jesse_brodtkin/status/1465767069182529537
65	12/1/2021	Jesse Brodtkin	No, I honestly think SavaDx is 100% a fraud and so is \$sava If Remi wants to dispute, he can, or not. I doubt he will address because that would just create another round of lies for him t keep track of and get caught on by the numerous agencies investigating them.	https://twitter.com/jesse_brodtkin/status/1466118252560482304
66	12/1/2021	Jesse Brodtkin	The patient IDs are on the poster. SavaDX is 92-100% accurate in July of 2020. \$sava is lying about SavaDX and everything else	https://twitter.com/jesse_brodtkin/status/1466121893732229125
67	12/1/2021	Jesse Brodtkin	when you are done contemplating your navel and the proper way to average replicates, why don't you explain how you get a ratio of proteins from a single band on the AAIC poster \$sava dx is a fraud	https://twitter.com/jesse_brodtkin/status/1466165529559932929
68	12/3/2021	Jesse Brodtkin	Let's hope something good comes out of this \$sava fraud saga, like maybe reform of the broken system of scientific review and retraction 🤝 @StnJournals @TurrigianoLab @MarinaP63 tick tock ☐	https://twitter.com/jesse_brodtkin/status/1466907354184794119
69	12/5/2021	Adrian Heilbut	And we also know that \$SAVA is hiding something, because they deliberately do not provide any of the experimental details or the real data on the poster necessary to properly assess or interpret what the heck is going on.	https://twitter.com/Adrian_H/status/1467372763304415233
70	12/6/2021	Jesse Brodtkin	My dude, it REVERSES cognitive decline, these patients are literally getting smarter within weeks of taking Simuflam... SavaDX will identify AD years before onset with 100% accuracy and S will be started immediately (if it wasn't a total scam of gullible idiots that is ☹)	https://twitter.com/jesse_brodtkin/status/1467928421049278470
71	12/7/2021	Jesse Brodtkin	I am a sava fraud account, can't afford to be distracted by your shenanigans	https://twitter.com/jesse_brodtkin/status/1468358725853401100

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72	12/7/2021	Jesse Brodkin	Doubt it, \$sava has been uniquely brazen and inept in their scam, at least in my experience.	https://twitter.com/jesse_brodkin/status/1468404401194909704
73	12/7/2021	Adrian Heilbut	He's talking about measuring CSF/Plasma albumin, not SavaDx. That was done so \$SAVA could claim a "Treatment Benefit" on BBB integrity. And it was not done properly or using routine clinical methods, and the numbers are complete manipulated garbage.	https://twitter.com/Adrian_H/status/1468386878009266176
74	12/9/2021	Adrian Heilbut	Which one of those provides evidence for binding of the actual \$SAVA drug, Simufilam, to the actual supposed target, FLNA? (I thought you told me that the "cryptic binding sites" on the native protein were critical..) \$SAVA isn't going to be able to BS their way out of this.. Wut? The premise of the entire charade (both for AD and for Bordey's bizarre claims) is that the drug binds FLNA. The key data \$SAVA showed to establish that is physically impossible and MADE UP. It is all a complete fraud.	https://twitter.com/Adrian_H/status/1469088912232570880
75	12/9/2021	Jesse Brodkin	Hey \$sava dupes, ya know that amazing femtomolar affinity that's in you company's patent? Yeah well, shocker, it's total BS, defies laws of physics. No patent=\$0/share ☹️ #billish ☐	https://twitter.com/jesse_brodkin/status/1469004947501072387
76	12/9/2021	Jesse Brodkin	No. I don't want to reward fraudulent data. \$sava should be punished so that others do not attempt this scam. The best thing for AD research and patients is to maintain a fraud free and fact based investment environment.	https://twitter.com/jesse_brodkin/status/1469095555859103746
77	12/9/2021	Jesse Brodkin	18 months to replicate 🌀 any data, it'll take \$sava that long to hire reps, marketing and synthesis. They've been trying to hire 1 reg affairs person for 3 months. They have fraud cooties. All moot of course.	https://twitter.com/jesse_brodkin/status/1469122007174467587
78	12/9/2021	Jesse Brodkin	Since the patent contains fraudulent data, even if it does "work" (it won't) it will be the company with the best chemical manufacturing and distribution that will make money of it, and that ain't \$sava	https://twitter.com/jesse_brodkin/status/1469089894907658253
79	12/9/2021	Jesse Brodkin	No, but that's funny. I think by now they have realized they got bamboozled by \$sava fraud Wang.	https://twitter.com/jesse_brodkin/status/1469094252055613440
80	12/10/2021	Enea Milioris	\$SAVA Latest CUNY FOied emails show: - Wang lab analyses not blinded - Wang knows sample time-points for P2b OL study (Day 1 Vs 6 Month) - Wang lab has access to patient-specific info inc initials - Likely HIPAA violation (FDA, CRO have been alerted)	https://twitter.com/DRnotaDR/status/1469283655147298824
81	12/10/2021	Jesse Brodkin	It takes time to dig up and work out all the different ways \$sava lies to the public. Some of ours come from FOIA which we don't control when they arrive. We are building a damning case with solid proof, it doesn't happen all at once.	https://twitter.com/jesse_brodkin/status/1469210754662420481
82	12/10/2021	Jesse Brodkin	fraud crook misconduct scam snake-oil con scheme \$sava feel free to add any you can think of ☐	https://twitter.com/jesse_brodkin/status/1469393771737530371
83	12/11/2021	Jesse Brodkin	Leak the info given to them with the understanding that they wouldn't leak it. And I at least covered the last initial. Anyway, that is a minor issue compared to \$sava-fraud Wang being unblinded during your precious OL. How's the confidence in that data going? ☐	https://twitter.com/jesse_brodkin/status/1469781271920402441
84	12/11/2021	Jesse Brodkin	Key is "confines of the study", obv Pei and Wang lab are supposed to be blind according to SEC filings and *very probably* study protocol. It's a shit-show of fraud and incompetence. SEC has been informed of \$sava lies on filings ☐	https://twitter.com/jesse_brodkin/status/1469782611421716482
85	12/11/2021	Patrick Markey	Likewise. Ok, my prediction is that \$SAVA will not actually be able to finish P3 trials as planned. This story will end up somehow similar to Theranos. Mark my tweet, if I will have been wrong I will readily admit it! Here on Twitter!!!	https://twitter.com/PatricioMarceso/status/1469816464005906432

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86	12/13/2021	Jesse Brodtkin	So much easier to let the rest of society bear the costs of \$sava fraud than to act responsibly and do your job, right @MarinaP63? (Even when the investigation was done for you ☹) cc: @TurrigianoLab	https://twitter.com/jesse_brodtkin/status/1470366262505226244
87	12/13/2021	Jesse Brodtkin	In \$sava latest December slide deck they have moved SavaDX back from “initiate validation trial in 2021” to “in early stage development”. SavaDX is supposedly a simple blood based-diagnostic with a “92-98%” accuracy which they have been pumping since 2017 🤔 (it’s a scam too 🙄)	https://twitter.com/jesse_brodtkin/status/1470417898753699840
88	12/16/2021	Adrian Heilbut	Imagine what it must be like to be @lindsaybbar, the CSO of a scientific fraud like \$SAVA, knowing the charade is about to come crashing down & the last 15 years of your work is fake, & going on LinkedIn every day to comment on stock promotion videos put out by “Tendies Club” I think it's more about trying to fool herself into thinking that there are people who still trust and believe in her \$SAVA “science”.. she needs the affirmation, even if it’s coming from the clueless.	https://twitter.com/Adrian_H/status/1471532842693898246
89	12/16/2021	Jesse Brodtkin	It looks like my perfectly reasonable letter regarding an opaque investigation of the \$sava manipulated images by JoN didn’t make the latest issue. I trust electronic publication can proceed without further delay 🙏 The scientific community deserves transparency @MarinaP63	https://twitter.com/jesse_brodtkin/status/1471481003445268487
90	12/16/2021	Jesse Brodtkin	A great concise timeline of the \$sava scam from painful 🤔 origin to shambolic dissembling end game	https://twitter.com/jesse_brodtkin/status/1471623173363978247
91	12/17/2021	Jesse Brodtkin	I’m going with the simplest reasonable explanation as the most likely; the members that were on the board are ashamed to be associated with the scam and have resigned. \$sava would rather just bury that fact by erasing the web link than make an announcement. You’re welcome Pat 🙄	https://twitter.com/jesse_brodtkin/status/1471891940513878026
92	12/17/2021	Jesse Brodtkin	I think the cognitive scores, like the biomarker data are lies and meant to defraud investors and contaminate the market for real science. \$sava does a disservice to AD patients, and investors. What I have said about \$sava research is true and undisputed by \$sava * 🙄🙄	https://twitter.com/jesse_brodtkin/status/1471936321950302210
93	12/17/2021	Jesse Brodtkin	The \$sava lies never stop 🙄🙄	https://twitter.com/jesse_brodtkin/status/1471945262239207428
94	12/17/2021	Jesse Brodtkin	Important point on the continuing obligation JoN has to it’s readers and the scientific community regarding \$sava fraud in it’s journal.	https://twitter.com/jesse_brodtkin/status/1471961847876272129
95	12/18/2021	Adrian Heilbut	HBO has already made an excellent documentary on \$SAVA (and \$AMC) https://hbomax.com/series/urn:hbo:series:GX72QuwdZ0yGqwgEAAAY4[10] (in all seriousness, it’s worth watching..)	https://twitter.com/Adrian_H/status/1472395449285976067
96	12/18/2021	Jesse Brodtkin	It only takes Wang, Remi and probably Burns to be active liars. Some at \$sava are turning blind eye. Reg agencies haven’t engaged yet. Sites are not privy to manipulation and need not be complicit.	https://twitter.com/jesse_brodtkin/status/1472262528377970696
97	12/18/2021	Jesse Brodtkin	It took a decade for Remi to build the \$sava scam. Through scientific teamwork and perseverance we have exposed this fraud. The tide is turning 🙏 #ENDALZ	https://twitter.com/jesse_brodtkin/status/1472360231678234630
98	12/18/2021	QCM	\$SAVA you have been caught red handed! Stop the trials and spare the patients your useless treatment! #Savastoptheuselesstrials #savastopthetrials	https://twitter.com/QCMFunds/status/1472312705063268364
99	12/19/2021	Patrick Markey	It is precisely FOR those humans taking Simuflam that we are fighting! I believe it is unethical and counterproductive to give false hope and profit from that!!! Placebo can be had elsewhere and just as effectively. We should be exploring REAL treatments!	https://twitter.com/PatricioMarceso/status/1472552308487692295
100	12/20/2021	Adrian Heilbut	It is also the one that is absolutely central to the claim/lie that Simuflimflam has some kind of “mechanism of action” that might do anything for AD in humans.	https://twitter.com/Adrian_H/status/1473021298494296064

	Date	Author	Statement	Link
101	12/20/2021	Adrian Heilbut	The funny thing about that BS 2005 \$SAVA paper that Wang is now desperately trying to keep alive by fabricating “original” data is that we already know the “drug” that Pain Tx was trying to develop based on that “science” was a total failure, the first of Remi's many debacles. Wang has been fabricating his entire career, so I guess it shouldn't be so surprising that he would continue to do so.	https://twitter.com/Adrian_H/status/1473137579390377987
102	12/20/2021	Jesse Brodtkin	That's 2 \$sava-fraud Wang papers on the road to retraction... only 29 more to go 🗨️ □	https://twitter.com/jesse_brodtkin/status/1472903116202729475
103	12/20/2021	Jesse Brodtkin	Helpful lesson on why the central thesis of \$sava is an absolute lie. It's physically impossible to support their femtomolar affinity claim using their methods... STILL no comment by Remi, why? 🤔 □ (hint: because it was always a lie 🤔)	https://twitter.com/jesse_brodtkin/status/1472904557218906116
104	12/20/2021	Jesse Brodtkin	Award ceremony for \$sava's most brazen lie will be held in Twitter Spaces on January 27th, get your votes in. Reply to this tweet with you favorites. Winner gets □	https://twitter.com/jesse_brodtkin/status/1473013645571469318
105	12/20/2021	Jesse Brodtkin	But just on sheer impact, this guy is probably the winner. An image manipulation in response to questions of image manipulation followed by market manipulation. I could see jail time and an Editor resigning justified by this one pic alone. 🗨️ \$sava	https://twitter.com/jesse_brodtkin/status/1473031196334596099
106	12/21/2021	Adrian Heilbut	Decent chance that \$SAVA ends red.. Just another pathetic and increasingly desperate pump-and-dump onto the ignorant and credulous. It is all made up.	https://twitter.com/Adrian_H/status/1473315921972314118
107	12/21/2021	Jesse Brodtkin	I said we don't know because sava lies about everything, but I'll give you that we don't know that it isn't safe. I don't think i ever claimed that we know it isn't safe. Kinda flimsy to call that a lie. Happy?	https://twitter.com/jesse_brodtkin/status/1473172785035890688
108	12/21/2021	Jesse Brodtkin	\$sava is doing societal harm as well as committing securities fraud by lying about their “science”	https://twitter.com/jesse_brodtkin/status/1473457850584338440
109	12/25/2021	Jesse Brodtkin	This is probably true, were it not for the fact that their data is completely made up. The market is telling you there is a 98.3% chance \$sava is totally full of □	https://twitter.com/jesse_brodtkin/status/1474940682313863172
110	12/26/2021	Patrick Markey	This is getting tiring. Maybe one of the tagged institutional accounts actually wants to weigh in and make @dogs_valley aware that they are being played for a fool. Some more attention on this whole \$SAVA case probably wouldn't be all that bad. #EndAlz and #endfraud	https://twitter.com/PatricioMarceso/status/1475283618490687490
111	12/28/2021	Jesse Brodtkin	Hey @lindsaybbar maybe instead of spending your time trash talking on FB you could address a foundational flaw in \$sava and answer this question? (a scientist would address however a fraud would ignore and distract by feigning outrage)	https://twitter.com/jesse_brodtkin/status/1475842855457509381
112	12/29/2021	Jesse Brodtkin	It doesn't matter WHO points out the fraud and lies of \$sava (ad hominem #1). Not baseless as Remi already admitted “visual errors” (you're plain wrong or lying) Wester Blots are the foundation of sava's science 🤔 □ “Clean” is just wishful thinking #10. You look foolish.	https://twitter.com/jesse_brodtkin/status/1476114812266590209
113	12/30/2021	Jesse Brodtkin	\$sava is a fraudulent company cultivating a malicious mob through social media	https://twitter.com/jesse_brodtkin/status/1476671467764998144
114	12/31/2021	Jesse Brodtkin	But does, because if Wang is a serial fraudster then that brings all P2 biomarker data into question (more so since Quanterix? didn't see what Wang saw from the same samples). Plus it terminally poisons \$sava patents, sorry/not sorry □	https://twitter.com/jesse_brodtkin/status/1477077105804464135
115	1/3/2022	Adrian Heilbut	Not content with fabricating scientific data, the \$SAVA bulls are now fabricating correspondence from the DOJ for a pump..[12]	https://twitter.com/Adrian_H/status/1478028839150305282
116	1/3/2022	Jesse Brodtkin	Remi is truly blessed 🤔 with the dumbest shareholders, stay tuned for \$sava sponsored @JoeSpringer pump and dump at noon □	https://twitter.com/jesse_brodtkin/status/1478030144417763328
117	1/3/2022	Jesse Brodtkin	[accompanying link to story about conviction of Elizabeth Holmes] Hey Remi, did you catch this? Maybe you two could be roommates \$sava	https://twitter.com/jesse_brodtkin/status/1478161351772155911

	Date	Author	Statement	Link
118	1/3/2022	Jesse Brodkin	Even Theranos never claimed 98% accurate blood tests like \$sava much less for detecting AD []	https://twitter.com/jesse_brodkin/status/1478170474131644421
119	1/5/2022	Jesse Brodkin	Second step is to root out the frauds that are already in the market \$sava	https://twitter.com/jesse_brodkin/status/1478858109565161473
120	1/9/2022	Jesse Brodkin	I can't wait for \$sava presenting the medical discovery of the century, the cure for Alzheimer's, at #JPM22... Sure to be followed by big "deal" news.... Oh wait... 🤔🤔 [accompanying a photograph of a Theranos device]	https://twitter.com/jesse_brodkin/status/1480283663728361497
121	1/9/2022	Jesse Brodkin	It is exactly that. Here is the proof. \$sava has lied to the public, CTAD, SEC and now, apparently, you in private communications.	https://twitter.com/jesse_brodkin/status/1480332813232754693
122	1/9/2022	Jesse Brodkin	I guess so. \$sava said Wang was blinded. The Wang lab was not blinded as we showed in the emails. Therefore, \$sava lied. If you can't understand that simple set of facts, then yes, you are stupid.	https://twitter.com/jesse_brodkin/status/1480340493045485573
123	1/9/2022	Jesse Brodkin	They dropped SavaDX in the last update, because it was always BS 🤔🤔	https://twitter.com/jesse_brodkin/status/1480349649810739200
124	1/10/2022	Adrian Heilbut	That is not the point here. The point is simply that there is evidence in black and white that SAVA / Wang photoshopped images that they sent to JNeuro as "originals", and then pumped the stock based on their "erratum"	https://twitter.com/Adrian_H/status/1480688243578388480
125	1/10/2022	Jesse Brodkin	\$sava has (likely) been manipulating their data for years and is under investigation by sec, fda, nih and cuny for scientific misconduct	https://twitter.com/jesse_brodkin/status/1480712729660899330
126	1/10/2022	Jesse Brodkin	Post a pic of literally anything in your vicinity that says you are a doctor 9:40... go ahead, you can black out the name if you are ashamed of believing Simuflimflam isn't a scam	https://twitter.com/jesse_brodkin/status/1480731617853329411
127	1/12/2022	Jesse Brodkin	Is \$sava cherry-picking respected institutions (Yale and Rush) out of their trials or are reputable institutions preserving their dignity by dropping \$sava. Waiting for Remi to tell us how both are bullish indicators for the P3 trials []	https://twitter.com/jesse_brodkin/status/1481239751084716037
128	1/12/2022	Jesse Brodkin	They can't even retain a Scientific Advisory Board, and those guys are paid! \$sava such an obvious scam []	https://twitter.com/jesse_brodkin/status/1481253519390908419
129	1/12/2022	Jesse Brodkin	I like this \$sava manipulated image in response to accusations of \$sava manipulating images 🤔🤔 h/t Bik	https://twitter.com/jesse_brodkin/status/1481341654976057348
130	1/14/2022	Jesse Brodkin	🤔 My one theory is \$sava is a scam	https://twitter.com/jesse_brodkin/status/1482060843500064771
131	1/17/2022	Adrian Heilbut	\$\$SAVA is worse than Theranos	https://twitter.com/Adrian_H/status/1483101856771497988
132	1/18/2022	Adrian Heilbut	Wang is a total fraud. All of his work is destined to be retracted. Bordey took Burns at her word & didn't do the experiments necessary to test MoA of Simuflimflam. Picciotto got fooled by Burns & made a major error as an editor; to her credit she partially corrected her mistake.	https://twitter.com/Adrian_H/status/1483579466760740871
133	1/19/2022	Adrian Heilbut	\$\$SAVA science is a total fraud and those relating hopeful anecdotes about patients currently in the clinical trials are either fools or shills.	https://twitter.com/Adrian_H/status/1484016429770817537
134	1/20/2022	Jesse Brodkin	icymi MOAR \$sava fraud news. A clean paper retraction by a group that was unfortunate enough to collaborate with Dr Wang []	https://twitter.com/jesse_brodkin/status/1484153502482022400
135	1/20/2022	Jesse Brodkin	spelled out pretty clearly here, Wang attempted to clear himself of image manipulation accusations by producing manipulated images AGAIN (cc @JuanLerma1 @MarinaP63) \$sava	https://twitter.com/jesse_brodkin/status/1484230455452962817
136	1/20/2022	QCM	\$\$SAVA is slowly advancing toward its doom. It should have imploded in November, but it endured thanks to shameless market shenanigans. Now it's on its way down thanks to the efforts of dedicated scientists fighting for truth	https://twitter.com/QCMFunds/status/1484076009708302340
137	1/25/2022	Jesse Brodkin	Is this the "harassment" you accuse us shorts of doing? By attacking the messenger are you conceding you have no response to the message? (The message is \$sava is a fraud 🤔)	https://twitter.com/jesse_brodkin/status/1485952774227566598

	Date	Author	Statement	Link
138	2/10/2022	Adrian Heilbut	\$\$SAVA remains a complete scientific fraud that is going to have its rug pulled any day, and Mr. Market knows it..	https://twitter.com/Adrian_H/status/1491812124200517633
139	2/14/2022	Adrian Heilbut	And the claim is that changes of all the different biomarkers in *placebo* are correlated. So *ERRORS* are perfectly correlated, and that is somehow supposed to be a good thing & “validate” Wang’s fabrications as better? WTF? Can someone please explain Lindsay’s logic? \$\$SAVA	https://twitter.com/Adrian_H/status/1493231683851718670
140	2/15/2022	Jesse Brodtkin	Lawrence you have missed the point entirely. When there is no effect the fact that random fluctuations across biomarkers are insanely correlated is a sign of manipulation, really really stupid and obvious manipulation. \$sava	https://twitter.com/jesse_brodtkin/status/1493625346108932099
141	2/17/2022	Jesse Brodtkin	It looks like \$sava may be doing some sketchy patient selection in their OL clinical trial... I know, it’s shocking	https://twitter.com/jesse_brodtkin/status/1494288600904736768
142	2/18/2022	Jesse Brodtkin	\$sava fans love Open Label “data”, but Remi has been hiding 2/3 of the data he has already seen. I wonder why he only shows “first 50” (hint: rhymes with berry-dicking ☺)? refs from NIH FOIA follow	https://twitter.com/jesse_brodtkin/status/1494654112603987971
143	2/22/2022	Jesse Brodtkin	\$sava fraud Wang	https://twitter.com/jesse_brodtkin/status/1496231863865782283
144	3/1/2022	Adrian Heilbut	It’s not odd. They won’t throw him under the bus until they absolutely have to. As soon as Wang falls, all of their “science” evaporates. Only after the science collapses will SAVA turn and blame him.	https://twitter.com/Adrian_H/status/1498765213914611715
145	3/2/2022	Adrian Heilbut	am I? Could you remind me? I thought I was on the record saying Wang is full of it & everything about Simufilam was made up of whole cloth. Has Wang done legit research? Pre-2000? Has he done a few real expts? Sure. He needs to run Westerns to get diverse bands to Photoshop.	https://twitter.com/Adrian_H/status/1499185731960553473
146	3/2/2022	Jesse Brodtkin	\$sava data hiding scheme (updated from 10k). Remi has seen all the data. I wonder why he hasn’t shown it to investors	https://twitter.com/jesse_brodtkin/status/1498996080763195392
147	3/3/2022	Adrian Heilbut	Meanwhile, NIH @NIHAgging happily funds completely fraudulent science from \$\$SAVA.	https://twitter.com/Adrian_H/status/1499598571611594755
148	3/5/2022	Adrian Heilbut	Typically, a biotech is not a soup-to-nuts scientific charade. \$\$SAVA	https://twitter.com/Adrian_H/status/1500187694827196417
149	3/6/2022	Adrian Heilbut	He [Dr. Wang] might be aware of the fraud, yet still not acknowledge to himself that his results aren’t real. It’s complicated. You should read about Erin Potts-Kant, Anil Potti (& Nevins), Woo Suk Hwang, Piero Anversa, Elias Alsabti, Vijay Soman (& Philip Felig) Happens regularly. \$\$SAVA	https://twitter.com/Adrian_H/status/1500586677097701377
150	3/6/2022	Adrian Heilbut	This [simufilam] is never going to get approved, because there is no there there and there is a limit to what can be made up, but that is years out and not the battle being fought.	https://twitter.com/Adrian_H/status/1500692453371879425
151	3/8/2022	Adrian Heilbut	Do the individuals on the Editorial Board of a journal share responsibility for the content of the journal? Should they pay attention & care when their journal publishes completely fabricated nonsense? https://journals.elsevier.com/neurobiology-of-aging/editorial-board Asking for a friend. @MicrobiomDigest \$\$SAVA	https://twitter.com/Adrian_H/status/1501180828272975872
152	3/8/2022	Adrian Heilbut	Here’s the problem, in case you STILL don’t get it: in the paper, Wang and \$\$SAVA were claiming that the pairs of images were derived from DIFFERENT MICE that had undergone DIFFERENT TREATMENTS, sacrificed four months apart. In other words: they are LIARS, and it is ALL MADE UP	https://twitter.com/Adrian_H/status/1501364496132104192
153	3/8/2022	Adrian Heilbut	This paper is CENTRAL to Simufilam and was included in the IND and the ph2 and ph3 investigator brochure. The image duplications are just the tip of the iceberg; almost every experiment in the paper has clear evidence of fabrication. This paper WILL go down, and with it, \$\$SAVA	https://twitter.com/Adrian_H/status/1501366846158786563

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154	3/8/2022	Adrian Heilbut	I think \$SAVA is going to be one of those once-in-a-decade scandals that results in congressional investigations and new laws @HollyLynchez @SteveJoffe @MichelleNMeyer @pzettler @GovindPersad @lietzan	https://twitter.com/Adrian_H/status/1501395842632237060
155	3/8/2022	Adrian Heilbut	Another BEAUTIFUL analysis by Gonaxis quadrilateralis on Pubpeer to quantify the painfully obvious image duplication in Wang 2017, first noted by @MicrobiomDigest and @PSBROOKES Sometimes a picture is worth a thousand words. \$SAVA https://pubpeer.com/publications/80DD10169D3C375C5828BC2711A49B cc: @KarlHerrup Here's the problem, in case you STILL don't get it: in the paper, Wang and \$SAVA were claiming that the pairs of images were derived from DIFFERENT MICE that had undergone DIFFERENT TREATMENTS, sacrificed four months apart. In other words: they are LIARS, and it is ALL MADE UP This paper is CENTRAL to Simufilam and was included in the IND and the ph2 and ph3 investigator brochure. The image duplications are just the tip of the iceberg; almost every experiment in the paper has clear evidence of fabrication. This paper WILL go down, and with it, \$SAVA	https://twitter.com/Adrian_H/status/1501366846158786563
156	3/8/2022	Adrian Heilbut	I think \$SAVA is going to be one of those once-in-a-decade scandals that results in congressional investigations and new laws @HollyLynchez @SteveJoffe @MichelleNMeyer @pzettler @GovindPersad @lietzan	https://twitter.com/Adrian_H/status/1501395842632237060
157	3/9/2022	Jesse Brodtkin	Remi has never made money he's only spent and pocketed investor's money \$sava will be no exception.	https://twitter.com/jesse_brodtkin/status/1501647879252938757
158	3/13/2022	Adrian Heilbut	Almost everyone at \$SAVA is "management" — they have almost no operational people just doing work. The CROs working for them have plausible deniability, but it is not going to be a great look when it blows up. As for Wang's lab, anyone left should know better and is complicit.	https://twitter.com/Adrian_H/status/1503124018274222090
159	3/15/2022	Adrian Heilbut	People can debate methods & adequacy of controls, or if specific fabricated figures are essential to the main findings of the report. But when the key conclusions of the paper are self-contradictory, there will be no more weaseling or faking originals. Reductio ad absurdum. \$SAVA	https://twitter.com/Adrian_H/status/1503920351297814528
160	3/15/2022	Jesse Brodtkin	WTF Adrian, are you suggesting Wang faked foundational experiments with a basic misunderstanding of pharmacology and nobody at \$sava or any of the peer reviewers or journal editors picked up on this for the last 5 years?!! ☐	https://twitter.com/jesse_brodtkin/status/1503798922195746818
161	3/17/2022	Jesse Brodtkin	"We" are some Twitter friends that have been trying to expose Cassava and Wang as frauds. You can be one too 🍷 . All you have to do is tweet some new observation about sava fraud and you are in the club ☐	https://twitter.com/jesse_brodtkin/status/1504481360504786945
162	3/22/2022	Jesse Brodtkin	first of many dominoes to fall on \$sava mountain of fraud... CUNY ruling right around the corner ☐	https://twitter.com/jesse_brodtkin/status/1506341780782034952
163	3/22/2022	Jesse Brodtkin	I mean that's a lot of "errors" to make without intending to ☹️ Maybe they were *just* "visual errors", typos, fatigue and accidents...but given \$sava prior pattern of behavior I find that highly unlikely ☐	https://twitter.com/jesse_brodtkin/status/1506344518769156098
164	3/24/2022	Adrian Heilbut	At your service. Here's the \$SAVA Ph3 Investigator's Brochure, showing how the clinical charade critically depends on results from flawed and made-up papers that now have editorial Expressions of Concern hanging over them.	https://twitter.com/Adrian_H/status/1507096496361115652

	Date	Author	Statement	Link
165	3/30/2022	Adrian Heilbut	BOOM! This paper was Wang's original sin underlying ALL of the \$SAVA nonsense -- the claim that Naloxone binds to Filamin-A. It is bogus, and now retracted. IT IS ALL MADE UP. THEIR DRUG DOES NOT BIND A TARGET AND COULD NOT HAVE BEEN DISCOVERED AS DESCRIBED IN THEIR PATENTS.	https://twitter.com/Adrian_H/status/1509241303732731905
166	3/30/2022	Adrian Heilbut	and Wang / Burns \$SAVA were caught red-handed sending more faked "original" blot images to @PLOSONE, just like they initially bamboozled @SfnJournals @MarinaP63 and @JuanLerma1 @ELSneuroscience	https://twitter.com/Adrian_H/status/1509244697444814851
167	3/30/2022	Adrian Heilbut	This is the beginning of the end for \$SAVA. It is going to be much easier for @CUNYResearch @GC_CUNY @CUNY as well as the other more cowardly journals to take appropriate action now, and all will be revealed.	https://twitter.com/Adrian_H/status/1509249134016016384
168	4/2/2022	Adrian Heilbut	Please read the pubpeer comments. The science is wrong. Several of the experiments described are *impossible* and make no sense. In fact, the paper is not even wrong; it is fiction. It is not science, and the authors are not acting as scientists \$SAVA	https://twitter.com/Adrian_H/status/1510351351536046084
169	4/5/2022	Jesse Brodtkin	\$sava fireside: "it's too soon to talk about SavaDX milestones", but last year we were told clinical validation study coming 2021. Similar story with a "non-dilutive deal"... speaks to Remi's pattern of misleading investors.. ofc still clinging the BIG LIE of Simufilam	https://twitter.com/jesse_brodtkin/status/1511358877241118721
170	4/7/2022	Jesse Brodtkin	If you are still gullible enough to be in \$sava, here is a graph to help you estimate when they will have all their sites "recruiting"... mind you they may be "paused" (which would explain "lumpy" 60 enrollment only .25 enrolled per site per month 📉)	https://twitter.com/jesse_brodtkin/status/1512101034247741443
171	4/8/2022	Adrian Heilbut	CUNY has fired people and settled with the government for much less than is at stake with Dr. Wang and \$SAVA	https://twitter.com/Adrian_H/status/1512600260186628098
172	4/8/2022	Adrian Heilbut	This is what happened the last time a CUNY professor was the target of a DOJ investigation. \$SAVA https://nytimes.com/2018/05/31/nyregion/medgar-evers-college-certificates.html	https://twitter.com/Adrian_H/status/1512621445406511111
173	4/9/2022	Jesse Brodtkin	Like all things \$sava, the SAB saga: 1. It was never legit 2. Called-out 3. Sava "fixes" 4. Even that is a lie	https://twitter.com/jesse_brodtkin/status/1512740862861664256
174	4/9/2022	Jesse Brodtkin	\$sava not having a 9mo interim readout with effect sizes like this (and statistical significance with N=50) is practically medical and definitely statistical malpractice (unless they know it's BS 🤔)	https://twitter.com/jesse_brodtkin/status/1512815021436411904
175	4/18/2022	Jesse Brodtkin	Well the New York Times has (finally) taken on the colossal \$sava fraud story 📖 Chapter 1:	https://twitter.com/jesse_brodtkin/status/1516229157549912064
176	4/18/2022	Jesse Brodtkin	They could have hit the moral evil of the \$sava story a little harder, how manipulative this fraud is of vulnerable patients, how terrible this is for investment in AD research and how this casts doubt on future Alzheimer's findings, good start NYT, but pick up your game for CH2	https://twitter.com/jesse_brodtkin/status/1516232639799123968
177	4/19/2022	Adrian Heilbut	also ignores broader 20-year scientific fraud at CUNY involving many collaborators, lack of CUNY oversight, crazy IP policy, SAB enablers, CUNY inaction, coming False Claims cases, FDA IND evaluation fail, NIH review fail, journal & University coverups, and securities fraud \$SAVA	https://twitter.com/Adrian_H/status/1516374076633268230

	Date	Author	Statement	Link
178	4/19/2022	Adrian Heilbut	@CUNY @CUNYNeuro @GradCenterBio @CityCollegeNY @CUNYResearch @GC_CUNY @ChancellorCUNY @EDNYnews @CunyMedicine Do you have anything to say about Dr. Wang's long (and ongoing) scientific fraud at CUNY and \$SAVA? How can you stay silent? @MelissaKleinNYP @TamarLapin @cayla_bam	https://twitter.com/Adrian_H/status/1516428977514201090
179	4/19/2022	Jesse Brodtkin	This was \$sava and accompanied by a stock halt... I think I could get a jury to convict on market manipulation (with intent)...maybe not a slam-dunk, but close enough to force Remi into a deal with jail time ☐	https://twitter.com/jesse_brodtkin/status/1516472024767422464
180	4/19/2022	Jesse Brodtkin	Yes there is a misconduct investigation of \$sava Wang (cc: @apoorva_nyc) and it looks like the CUNY scientists think there is good reason to find fraud... let's see if the "leaders" at @CUNY can figure this one out ☐	https://twitter.com/jesse_brodtkin/status/1516566336666619905
181	4/20/2022	Jesse Brodtkin	What's past is prologue: a nice summary of the \$sava crime family's earlier shenanigans as PTI and the trial and settlement that resulted. Remi hasn't changed a bit.	https://twitter.com/jesse_brodtkin/status/1516982949396197376
182	4/21/2022	QCM	Unfortunately, @CUNY's seeming reluctance to swiftly and transparently put an end to the \$SAVA affair makes me fear that there might well be an element of collusion or perhaps an attempt to cover up	https://twitter.com/QCMFunds/status/1517045131844726784
183	4/22/2022	Adrian Heilbut	No, it shows someone realized how inappropriate it was for Wang to do it, and \$SAVA's hand was forced, because nobody could say out loud "but it is a fraud, guys, and will only work if Wang does it" What did Lindsay, Remi, and Friedmann know, and when did they know it?	https://twitter.com/Adrian_H/status/1517480871544213507
184	4/22/2022	Adrian Heilbut	I think their man Hoau-Yan "Photoshop" Wang is too busy fielding inquiries from the Feds and no longer available to run more ELISAs or photoshop Western blots, so \$SAVA are up a creek without a paddle.	https://twitter.com/Adrian_H/status/1517522433649090561
185	4/22/2022	Jesse Brodtkin	☞ That is a defensible argument, but only if they admit to the lies of last decade. I would agree to let the trial continue if the fraud is punished and the incentive to commit further fraud is removed (i.e. Remi and Wang are removed from \$sava and cooperate with authorities)	https://twitter.com/jesse_brodtkin/status/1517673038107480066
186	4/23/2022	Jesse Brodtkin	How about the steadily growing body of evidence that \$sava and Wang do a lot of lying (or make a lot of "mistakes"), does that effect your assessment?	https://twitter.com/jesse_brodtkin/status/1517940911086309376
187	4/23/2022	Jesse Brodtkin	However Remi's behavior since being publicly questioned suggests he was simply lying and not amazingly lucky. That liars are far more common than once-in-a-lifetime serendipitous discoveries also suggests \$sava is going to cash-liabilities <\$0	https://twitter.com/jesse_brodtkin/status/1517946628379856896
188	4/25/2022	Jesse Brodtkin	Also, two of these flagged grants were from \$sava to work on their P2b clinical trail. Specifically the SavaDX and CSF biomarker work. Both efforts were determined to warrant a scientific misconduct investigation. FDA can't be happy about fraudulent work done in human subjects	https://twitter.com/jesse_brodtkin/status/1518615410593128448
189	4/25/2022	Jesse Brodtkin	It's not nit-picking, it's establishing a 20 year pattern of lying that informs how one might evaluate \$sava current claims.	https://twitter.com/jesse_brodtkin/status/1518667774805135360
190	4/26/2022	Jesse Brodtkin	Yeah so in his castigation of the NYT, Remi chides reporter for not checking her facts on UCSF involvement in Trials... problem is they AREN'T 🤔🤔🤔... Maybe check YOUR facts first Remi you sloppy liar \$sava	https://twitter.com/jesse_brodtkin/status/1519082195691921408
191	4/26/2022	Jesse Brodtkin	The only companies with a "similar MOA" to \$sava are Theranos, WeWork and Bernie Madoff ☐	https://twitter.com/jesse_brodtkin/status/1519109102592536576
192	4/27/2022	Jesse Brodtkin	Who's excited for \$sava fireside chat? 🤔🤔🤔wonder if Remi will address his ridiculous claim that UCSF is involved in his scam Clinical Trial?	https://twitter.com/jesse_brodtkin/status/1519363541408571393

	Date	Author	Statement	Link
193	4/27/2022	Jesse Brodtkin	Nice catch! Yeah it looks like UCSF was thinking about getting caught up in the \$sava scam, but reconsidered this morning 🤔... add UCSF to Yale and Rush as institutions that didn't want to sully their reputations (before/after pics 📷)	https://twitter.com/jesse_brodtkin/status/1519381562193817600
194	4/27/2022	Jesse Brodtkin	If the whole thing weren't a con, any responsible \$sava board would have canned Remi long ago. If Remi actually believed in Simufilam, he would realize he doesn't have the skills or temperament to develop a drug and resign with his shares. Just sayin	https://twitter.com/jesse_brodtkin/status/1519423192720236544
195	4/28/2022	Jesse Brodtkin	\$sava has existential patent problems and possible JAIL for Wang, Remi and Burns.	https://twitter.com/jesse_brodtkin/status/1519622523482222592
196	4/28/2022	Jesse Brodtkin	There is a reason the short float is so high. It's because \$sava is a scam company based on lies. But don't let that effect your "technical analysis" 📄	https://twitter.com/jesse_brodtkin/status/1519686812339482625
197	4/28/2022	Jesse Brodtkin	My dude, \$sava is a scamCo, don't tell your followers to buy frauds 🙅♂️📄	https://twitter.com/jesse_brodtkin/status/1519765788248494083
198	4/28/2022	Jesse Brodtkin	I don't like liars, especially in science. And to do it at the clinical level, taking advantage of desperate people is particularly disgusting. Remi is a sociopath and needs to be stopped. \$sava	https://twitter.com/jesse_brodtkin/status/1519832798571470854
199	4/29/2022	Adrian Heilbut	City University of New York is the epicenter of the Cassava \$SAVA fraud. By LAW, @CUNY holds PUBLIC HEARINGS in each borough. These are virtual, w/ video & written testimony. I wrote the Trustees a letter. CUNY censored it. So here's my latest testimony.	https://twitter.com/Adrian_H/status/1520085533107630082 https://youtu.be/0PqfLcmu2jk
200	4/29/2022	Adrian Heilbut	\$SAVA doesn't have any IP	https://twitter.com/Adrian_H/status/1520112893706096640
201	5/2/2022	Jesse Brodtkin	Only an rube like this guy could fall for the \$sava baloney... and @CharlesStonkson, apparently 🤡 ... but even he is out by now.. not tough-guy CS. Buy more shares "chemist-boy"	https://twitter.com/jesse_brodtkin/status/1521189123868053504
202	5/2/2022	Jesse Brodtkin	No but you could sue a company for knowingly using a forged document to manipulate the market 🤡 \$sava	https://twitter.com/jesse_brodtkin/status/152125755460337665
203	5/3/2022	Jesse Brodtkin	Remi would like re-elect the directors (because they have done such a great job dealing with the scientific fraud), and give himself \$80m to divvy up among the 12 employees. \$sava bulls will lap this up b/c once you pass the dignity event horizon, what's another \$80m 🙅♂️📄	https://twitter.com/jesse_brodtkin/status/1521586256664268800
204	5/4/2022	Jesse Brodtkin	Now we know why Remi hired this obvious bottom-feeder; to make the case that he needs 4m shares to attract better "talent" to pump \$sava stock 🤡📄	https://twitter.com/jesse_brodtkin/status/1521920008644964352
205	5/5/2022	Jesse Brodtkin	I don't think the reason most "scientists" remain anonymous in their support of \$sava is fear of some tweets. It's because they are ashamed of supporting a scam or aren't really what they say they are... my opinion.	https://twitter.com/jesse_brodtkin/status/1522303437857304577
206	5/9/2022	Jesse Brodtkin	\$sava is a perfect example of what cannot be tolerated (fraud) in biomedical research.	https://twitter.com/jesse_brodtkin/status/1523676538658443266
207	5/9/2022	Jesse Brodtkin	\$sava now poster-boy for fraud... congrats Remi 🤡🤡🤡	https://twitter.com/jesse_brodtkin/status/1523676546380095488
208	5/9/2022	Jesse Brodtkin	@Adrian_H giving CUNY notice that we will not allow a cover-up of \$sava Wang's scientific fraud. All investigation findings should be made public ASAP. @CUNYNeuro @CSOM_Official	https://twitter.com/jesse_brodtkin/status/1523778067478421504
209	5/12/2022	Jesse Brodtkin	Even little-ole Pete at Neurobiology of Aging could find the fraud in \$sava Wang's papers. But somehow couldn't find it within himself to call it intentional 🤡 14 erroneous select-copy-pastes on one figure and they were all "accidental" 📄	https://twitter.com/jesse_brodtkin/status/1524738905991487489
210	5/12/2022	Jesse Brodtkin	Wang then corrects his typo with another typo cc his lawyer and moves the discussion to a more secure channel. That's because how he attempts to explain his "innocent and regrettable" errors should never see the light of day, like how all good innocent science is done 🤡 \$sava	https://twitter.com/jesse_brodtkin/status/1524740524703428608

	Date	Author	Statement	Link
211	5/12/2022	Jesse Brodtkin	Note the blots had “selectable” insertions in the lanes. No dancing dust, compression artifacts or other such nonsense creates a selectable image within the blot 🌀🌀🌀 \$sava is a fraud based on Wang’s fantasy story pasted together with images stored on his hard drive, literally	https://twitter.com/jesse_brodtkin/status/152474527772599296
212	5/15/2022	Jesse Brodtkin	The distinction between manipulation, error and misrepresentation is interesting for determining punishment and will be adjudicated in court later. At this juncture the relevant point is that many \$sava papers (and SEC filings) contain data and claims that are not true.	https://twitter.com/jesse_brodtkin/status/1525861341826846721
213	5/18/2022	Jesse Brodtkin	Who cares? The image was “selectable”. Case closed (again) \$sava is a fraud.	https://twitter.com/jesse_brodtkin/status/1527082440111468544
214	5/19/2022	Jesse Brodtkin	Beginning to think \$sava data is completely made up ☐	https://twitter.com/jesse_brodtkin/status/1527384044526112770
215	5/20/2022	Jesse Brodtkin	It seems \$sava unblinded Wang to time point in the P2b (allowing him to line up his gel lanes in order by time) just like they unblinded Wang to time point in the OL... kinda looking like a pattern here ☐	https://twitter.com/jesse_brodtkin/status/1527650227385249792
216	5/24/2022	Jesse Brodtkin	I have long ago given up on affecting the price of sava by tweeting (it doesn’t). This is mostly just for fun, keeping a record and making the fraud public to discourage further fraud. That last part is kinda working as evidenced by Remi scaling back his claims and being quiet.	https://twitter.com/jesse_brodtkin/status/1529244353356566530
217	5/29/2022	Patrick Markey	Sorry, I have to tweet when I see what I perceive to be an obvious case of fraud / abysmal scientific integrity. How about you pin a tweet saying “I was wrong, UCSF is NOT participating in \$SAVA trials because their data doesn’t make any sense.”...	https://twitter.com/PatricioMarceso/status/1530963037905117184
218	5/31/2022	Jesse Brodtkin	Remi figured out that every time he tries to show data or publish he just makes \$sava look more like a fraud, therefore there will be no data and no publications ☐	https://twitter.com/jesse_brodtkin/status/1531724537406029827
219	5/31/2022	Jesse Brodtkin	Big SAVA news!!! new SEC filing? Nope. New PR from company? Nope.... Another pump-and-dump on nothing from a ScamCo? Yes ☐	https://twitter.com/jesse_brodtkin/status/1531729699717713920
220	6/1/2022	Jesse Brodtkin	Once you realize that the foundation (NLX binding FLNA) is total BS, the sheer mountain of fraud that \$sava has built upon this is actually impressive. Here is just one example from their patent (none of these experiments happened)	https://twitter.com/jesse_brodtkin/status/1531975409994194944
221	6/2/2022	Jesse Brodtkin	We are just playing a tiny part in trying to shine a light on the \$sava garbage “science”. The fraud is doing the heavy lifting behind the retractions, EoC, failure to publish and scuttling of SavaDX. If you want to blame someone look to Wang and Remi.	https://twitter.com/jesse_brodtkin/status/1532522197754978307
222	6/8/2022	Jesse Brodtkin	This is most certainly the beginnings of an agreement between the NIH and @CSOM_Official to make sure that the spectacular fraud that Wang and \$sava embroiled @cuny in doesn’t ever happen again. Shame on @CUNYNeuro and @Vgbcc1 for harboring these crooks for 20 years ☐	https://twitter.com/jesse_brodtkin/status/1534639669719314432
223	6/9/2022	Jesse Brodtkin	I’m expecting flowers and presents from bulls once \$sava crashes. We were trying to save them money for months and they will retroactively appreciate our efforts ☐	https://twitter.com/jesse_brodtkin/status/1534909256247480323

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224	6/13/2022	Adrian Heilbut	<p>When you are running a fraud, one of the most important things is to have a strong astroturfing game. You need to make sure that your narrative is the dominant one, and you must try to discredit your detractors whenever possible. \$SAVA</p> <p>One of the main astroturfing fields of play is of course, Wikipedia. So it did not escape my attention that there have been a flurry of edits to the pages about Simufilam lately, as well as the article about Dr. Lindsay Burns (is she really notable?)</p> <p>There are some key points that are really important to the \$SAVA narrative, eg:</p> <p>“it’s only about some old western blots” ...</p> <p>“the short sellers are behind it” ..</p> <p>“something something biomarker correlation” ..</p> <p>“altered conformation”</p> <p>https://en.wikipedia.org/w/index.php?title=Simufilam&diff=1086034976&oldid=1086026264</p> <p>Never miss an opportunity to try to throw some shade on David Bredt..</p> <p>and most important, you must never forget that Dr. Lindsay Burns graduated magna cum laude</p> <p>So, where is the prolific editor at 71.41.248.226 doing her editing from?</p> <p>https://en.wikipedia.org/wiki/Special:Contributions/71.41.248.226</p> <p>..direct from the Cassava Sciences offices.</p> <p>So now you know how the \$SAVA VP of Neuroscience spends her days.</p>	https://twitter.com/Adrian_H/status/1536408761774092289
225	7/1/2022	Jesse Brodtkin	<p>And \$sava is a fraud from the “discovery” by Wang to the biomarker redo by Wang to the cherry-picked “first 50” by Remi to the deal to SavaDX to Femtomolar to... YOU, however, should buy more shares ☐</p>	https://twitter.com/jesse_brodtkin/status/1542891655577174016
226	7/1/2022	Jesse Brodtkin	<p>Yeah the story of \$sava being a complete fraud really hasn’t changed, just more evidence piling up * 🤦. Sorry it’s not entertaining enough for you 🙄. If you don’t believe consistent stories of fraud with relentless evidence from multiple sources, keep buying more shares ☐</p>	https://twitter.com/jesse_brodtkin/status/1542893906177695747
227	7/5/2022	Jesse Brodtkin	<p>Why don’t evil shorties give \$sava the benefit of the doubt? Because Remi and co have been shady for decades, and everyone knows it.</p>	https://twitter.com/jesse_brodtkin/status/1544380423014387712
228	7/5/2022	Jesse Brodtkin	<p>Looks like \$sava Wang and Lindsay might have decreased their fraud workload by goosing the P2a first visit values and then just carry those numbers into the P2b and then the OL-extension, and those patients would be the first to complete so “first 50” takes on a new meaning ☐</p>	https://twitter.com/jesse_brodtkin/status/1544385339581669380
229	7/6/2022	Jesse Brodtkin	<p>Calling BS on \$sava seems to be catching on ☐</p>	https://twitter.com/jesse_brodtkin/status/1544710251403935744
230	7/6/2022	Jesse Brodtkin	<p>And \$sava fraud Wang presented him as an “independent expert” ☹️ (I guess if Wang is an “outside lab” then Spruck is “independent” 🤔🤔)</p>	https://twitter.com/jesse_brodtkin/status/1544789236683083776
231	7/7/2022	Jesse Brodtkin	<p>oof! here he is again in the “development” of the, now defunct, SavaDX baloney (100% accurate at diagnosing AD from blood ☹️) This dude has done more harm than good on AD, imo... way to go @harvardmed ☐</p>	https://twitter.com/jesse_brodtkin/status/1545095193929699328
232	7/7/2022	Jesse Brodtkin	<p>[responding to tweet about Theranos] You’re next Wang and Remi \$sava</p>	https://twitter.com/jesse_brodtkin/status/1545131873210454016
233	7/7/2022	Jesse Brodtkin	<p>@KarlHerrup in context this is basically an endorsement of \$sava 🤦🤦. You should know better (we told you). Please explain how you fell for this obvious scam again, even after your pathetic appearance on @JoeSpringer show.</p>	https://twitter.com/jesse_brodtkin/status/1545164521198821376
234	7/12/2022	Jesse Brodtkin	<p>“as a coauthor with Dr. Wang on 7 publications and a memeber of the \$sava SAB board and an early collaborator on SavaDX... * 🤦. Dunno if it’s all fraud” Aparently they don’t teach science or ethics at Harvard.</p>	https://twitter.com/jesse_brodtkin/status/1546851349899448322
235	7/12/2022	Jesse Brodtkin	<p>There is NO non-opioid binding site for Naloxone, much less a femtomolar one, much less a widespread one found in brain and lymphocytes. It’s a stupid lie for people who have zero understanding of biology \$sava</p>	https://twitter.com/jesse_brodtkin/status/1546905342705025026


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236	7/21/2022	Jesse Brodtkin	\$sava in the news again 🤔. This time as the poster-company (an entire inset sub panel on cassava and the fraudsters gang) for using fraud to hurt Alzheimer's Disease Research	https://twitter.com/jesse_brodtkin/status/1550190242916868096
237	7/21/2022	Jesse Brodtkin	Thinking maybe 'Blots on a Field' should be our nickname for the \$sava fraudsters and their enablers, catchy ☑	https://twitter.com/jesse_brodtkin/status/1550208116465319938
238	7/21/2022	Jesse Brodtkin	It's such a big market and there are so many gullible investors swimming around it that shady companies (\$atha \$avxl \$sava etc...) just can't help themselves to some evidence-free hype-line based valuation ☹ Terrible for markets, investors, patients and society ☑	https://twitter.com/jesse_brodtkin/status/1550214677631827968
239	7/21/2022	Jesse Brodtkin	\$sava Fraudsters and enablers ☑	https://twitter.com/jesse_brodtkin/status/1550250659022258179
240	7/21/2022	Jesse Brodtkin	Wait, there have been MORE concerns raised by Schrag THIS year 🤔 \$sava Wang has been on a 20 year fraud spree and at this point @CUNYNeuro is essentially abetting it 🤔☑	https://twitter.com/jesse_brodtkin/status/1550281136458317831
241	7/22/2022	Jesse Brodtkin	bye-bye 🤔 \$sava you parasites on society	https://twitter.com/jesse_brodtkin/status/1550487519170596871
242	7/23/2022	Jesse Brodtkin	This one is an old but fun \$sava lie. Here @lindsaybbar lies through her teeth while disparaging @MicrobiomDigest and then gets caught a month later and has to admit she was FOS ☑	https://twitter.com/jesse_brodtkin/status/1550975929996001280
243	7/23/2022	Jesse Brodtkin	Good point about the \$sava blots probably just the fraud we can see... there's tons we can't (but sava followers know 🤔)	https://twitter.com/jesse_brodtkin/status/1551012443308134402
244	7/24/2022	Jesse Brodtkin	Me too. Of course the odds of that happening are about as good as Remi singing a deal or @charlesstonkson making good on a lost bet, or Wang providing original images, or @lindsaybbar apologizing for lying or femtomolar binding or Simufilam curing AD... ZERO ☑	https://twitter.com/jesse_brodtkin/status/1551305475697917953
245	7/25/2022	Jesse Brodtkin	Here's another fun @lindsaybbar lie. After it was pointed out in a CP that the measurements in \$sava Simufilam femtomolar graph break the laws of physics, Lindsay tells her discord fan club it's a "typo" soon to be corrected..5 months later 🤔 The math did not "work out"	https://twitter.com/jesse_brodtkin/status/1551512193094533121
246	7/26/2022	Jesse Brodtkin	There are blots, read more carefully 🤔 no time for foia. \$sava are criminals, \$avxl is simply slimy and deceptive, different leagues. You should own both.	https://twitter.com/jesse_brodtkin/status/1551990991619506176
247	7/27/2022	Adrian Heilbut	So, Remi, when exactly did you start getting subpoenas from DOJ, and why wasn't that disclosed properly & promptly? Did they "ask" or demand? Why did you only say "certain government agencies"? True, you haven't sold stock. Who has, and how have *you* been profiting? \$SAVA[22]	https://twitter.com/Adrian_H/status/1552352582915563520
248	7/27/2022	Jesse Brodtkin	Nice timing Vince 🤔 Slow-walking fraud investigation seems to have paid off.. for now \$sava	https://twitter.com/jesse_brodtkin/status/1552254152088162304
249	7/27/2022	Jesse Brodtkin	Pro-tip @lindsaybbar fraud is not "entirely new".. \$sava 🤔☑	https://twitter.com/jesse_brodtkin/status/1552262740290445312
250	7/27/2022	Jesse Brodtkin	That's the attitude that allows frauds to hang around and continue to pollute the industry and harm patients. If you have a big platform (like you), you should use it to help. "All that is required for evil..." you know the rest \$sava	https://twitter.com/jesse_brodtkin/status/1552274261812944896
251	7/27/2022	Jesse Brodtkin	I don't think increased focus on fraud in Alzheimer's companies is the "good news" you think it is. \$sava revelations will only increase scrutiny on what is already a pretty sketchy \$avxl story	https://twitter.com/jesse_brodtkin/status/1552291908009050113
252	7/27/2022	Jesse Brodtkin	It's not nonsense, it's fraud and it hurts the field. \$sava was and is an easy call, how about now? Any thoughts on Cassava's chances of reversing AD?	https://twitter.com/jesse_brodtkin/status/1552308657311866880
253	7/27/2022	Jesse Brodtkin	Meanwhile in idiotville (SAVAges Discord chat) @lindsaybbar is continuing to encourage magical thinking that DOJ is actually going after shorts not \$sava... I mean it's not as dumb as Simufilam reverses AD but it's close ☑	https://twitter.com/jesse_brodtkin/status/1552335573179895808

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254	7/28/2022	Jesse Brodtkin	Shorts attack fraudulent companies that are taking advantage of mom & pop. Shorts have been telling you to sell \$sava for a year. Look at the chart and see if that would have been good advice for mom and pop.	https://twitter.com/jesse_brodtkin/status/1552726016191258629
255	8/4/2022	Jesse Brodtkin	Sorry guys, it was a trick question and the correct (98.8%) answer was: When a criminal gets a subpoena from the DOJ it tends to decrease their ongoing criminal behavior.... \$sava 🤔	https://twitter.com/jesse_brodtkin/status/1555330111838224384
256	8/4/2022	Jesse Brodtkin	Exactly how many crimes are you defending yourself against if you need \$400k PER MONTH in new legal representation? Asking for a friend \$sava 🤔 Serious question, does Remi have more lawyers than employees?	https://twitter.com/jesse_brodtkin/status/1555341632719003648
257	8/4/2022	Jesse Brodtkin	I'd think it would be cheaper to re-run a few western blots and binding studies to put the scientific questions to rest. Unless \$sava was guilty af .. then it would make sense Occam's Razor ☐	https://twitter.com/jesse_brodtkin/status/1555346954632192001
258	8/5/2022	Jesse Brodtkin	Confirmation to a statistical 99% certainty that \$sava favorite data, the OL "first 50" was completely cherry-picked.. case closed	https://twitter.com/jesse_brodtkin/status/1555525750228492290
259	8/12/2022	Jesse Brodtkin	Your credence in error or AE is admirable, but please consider the probable answer is \$sava never did these analyses and MADE IT ALL UP ☐	https://twitter.com/jesse_brodtkin/status/1558102135945961472
260	8/15/2022	Adrian Heilbut	It turns out that after you rip off the government for \$20m, one of the first things they do is to STOP giving you any more money. \$SAVA	https://twitter.com/Adrian_H/status/1559366695722049538
261	8/16/2022	Adrian Heilbut	basically it shows that CUNY and his last remaining colleagues recognize that Wang is radioactive, and are starting to throw him under the bus. \$SAVA	https://twitter.com/Adrian_H/status/1559531855778652161
262	8/16/2022	Adrian Heilbut	Might be time for Sandy Robertson to take an MMSE test. \$SAVA Robertson is going to regret blowing \$20m and immolating his reputation and legacy in the greatest biotech dumpster-fire of the last two decades. \$SAVA	https://twitter.com/Adrian_H/status/1559669678561181696
263	8/18/2022	Adrian Heilbut	[Twitter poll] What is Remi's next irrelevant and manipulative pump going to be about? \$SAVA SAVA pivot back to opioids Lindsay Wins Silver Medal Wang gets new job in DPRK Sandy enrolls in OL trial	https://twitter.com/Adrian_H/status/1560302038763929600
264	8/18/2022	Adrian Heilbut	They got it. Their behavior is disgraceful and pathetic, and they are going to end up with a lot of egg on their faces. \$SAVA	https://twitter.com/Adrian_H/status/1560310607437512705
265	8/20/2022	Enea Milioris	Mark Johnson (Dr) is a chronic underachiever whose mental health issues (possibly due to repressed sexuality) have confined him to the lowest ranks of his industry - smth he desperately tries to make up for thru fake online personas Sue me for libel + Sava data are made up (tm)[30]	https://twitter.com/DRnotaDR/status/1560880668984446981
266	8/20/2022	Enea Milioris	Alzscammers[31]	https://twitter.com/DRnotaDR/status/1561041038923501575
267	8/21/2022	Jesse Brodtkin	A \$2m (not \$20m) insider purchase hours before an "exonerating" non-public email from a journal is entirely consistent with securities fraud exactly the kind of behavior that would be of interest to, the ongoing SEC investigation of \$sava	https://twitter.com/jesse_brodtkin/status/1561400337306554368
268	8/25/2022	Jesse Brodtkin	Data cooking 🤔 \$sava	https://twitter.com/jesse_brodtkin/status/1562938359315677184
269	8/28/2022	Jesse Brodtkin	No biology experiment (ever) shows 0.97 correlation between biochemical measures, much less a dozen that are overall unchanged. This graph alone is proof-positive of data manipulation of clinical trial data by \$sava and Wang 🤔 ☐	https://twitter.com/jesse_brodtkin/status/1563997736881586177
270	8/28/2022	Jesse Brodtkin	Here's another straight-up admission of data manipulation; first and second cohort (pills vs cherries) of patients are statistically significantly different for no reason other than an investigation of data manipulation was started between the cohort readouts \$sava	https://twitter.com/jesse_brodtkin/status/1564000619697930240

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271	8/28/2022	Jesse Brodtkin	The entire basis for their drug “discovery” has been retracted. There is no non-opioid Naloxone binding site (where Simufilam supposedly binds). It started with a lie and just got out of control necessitating larger and larger lies to keep the story going \$sava	https://twitter.com/jesse_brodtkin/status/1564003968551895046
272	8/28/2022	Jesse Brodtkin	They’ve been lying for so long they have gotten sloppy. Here they got the thermodynamics backwards. If Simufilam binds AD-FilaminA with higher affinity (left curve) then that’s the conformation that is increased with addition of Simufilam (i.e. causes AD) \$sava	https://twitter.com/jesse_brodtkin/status/1564005563725484032
273	8/28/2022	Jesse Brodtkin	I don’t know what the expiration data on this dumb attempt at a pump based on a total lie is, but at 1+ years I think we can safely say Remi was FOS when he pumped a “deal” @sava	https://twitter.com/jesse_brodtkin/status/1564007181124599810
274	8/28/2022	Jesse Brodtkin	Apparently lying to pump stock price runs in the family. Here Mrs Barbier lies through her teeth in writing that her baloney femtomolar claim is correct and a typo will clear it all up (narrator: IT DIDN’T) \$sava	https://twitter.com/jesse_brodtkin/status/1564008067628400641
275	8/29/2022	Jesse Brodtkin	The level of fraud with \$sava is way beyond just securities, so this is probably the right move for the SEC to hand off to the DOJ, imo.	https://twitter.com/jesse_brodtkin/status/1564322010171334656
276	8/29/2022	Jesse Brodtkin	Don’t forget the quarterly spinal taps of elderly sick patients for CSF biomarkers. \$sava sociopaths	https://twitter.com/jesse_brodtkin/status/1564339560615665673
277	8/29/2022	Jesse Brodtkin	👁️. I’m on the record by name, not some anonymous coward jerk account, and stand by everything I’ve said. And it’s all true, \$sava is a fraud, Wang is a fabulist etc... It’s going to be pretty hard to get a prosecutor to push a case against critics of a fraud * 👁️	https://twitter.com/jesse_brodtkin/status/1564394717240074240
278	9/1/2022	Jesse Brodtkin	No journal is interested in publishing the disproof of obvious crap. The way it works is you get the journals to retract bullshit, which is what we’ve been doing and continue to do 🤔 \$sava...	https://twitter.com/jesse_brodtkin/status/1565463219891802113
279	9/1/2022	Jesse Brodtkin	Slow, but I have confidence the truth (\$sava is a fraud) will become apparent to DOJ, CUNY... and justice will be served. I’m proud of my efforts and hope that I have helped them. Now get a new hobby rather than pestering me.	https://twitter.com/jesse_brodtkin/status/1565487383356792833
280	9/2/2022	Jesse Brodtkin	It’s September and \$sava has 100 more Open Label subjects’ data. How long will Remi hide the data and avoid any and all questions? Delay not due to blinding (it’s OL) nor lab work on biomarkers (Wang’s magic license has been suspended), and only 16 sites.	https://twitter.com/jesse_brodtkin/status/1565729156326883328
281	9/3/2022	Adrian Heilbut	Who knew what when and anyone’s potential criminal liability is independent of the fact that the “drug” is fake, the preclinical research was fake, the biomarker data were faked, and the cognitive data was cherry-picked. IT IS ALL MADE UP. Unless they have samples banked, \$SAVA will never be able to report 12 month OL biomarker data, because they relied on Wang to fabricate the baseline and 6 month biomarker data. That little game is over.	https://twitter.com/Adrian_H/status/1566191479432925188
282	9/3/2022	Adrian Heilbut	Kupiec has zero to do with \$SAVA problems which pre-date him. The Ph3 is being run fine, albeit with a fake drug under false pretenses. But Kupiec can quite reasonably claim ignorance, and he is just going to keep collecting his salary until the jig is up.	https://twitter.com/Adrian_H/status/1566212883285000194
283	9/7/2022	Jesse Brodtkin	If \$sava are spending \$100m/yr with 400/1700 patients enrolled... \$200m does not get you to the end of either P3.... Where is that big deal that was going to finance this ScamCo? 🤔	https://twitter.com/jesse_brodtkin/status/1567656846323761154
284	9/10/2022	Adrian Heilbut	Matt only wants to cry crocodile tears about imaginary offenses against others, instead of waking up to reality and only thing that actually matters -- which is that all of Wang’s research was nonsense and Simufilam is an imaginary drug. https://pubpeer.com/search?q=Hoau-Yan+Wang[32]	https://twitter.com/Adrian_H/status/1568653474539372545

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285	9/10/2022	Adrian Heilbut	that was the only place Wang could get all his foundational Simufimflam nonsense published 15 years ago.. and the PLoS editors today have a lot of experience with this sort of thing and are on the ball[33]	https://twitter.com/Adrian_H/status/1568674411040964608
286	9/11/2022	Jesse Brodtkin	At this point, \$sava's unwillingness to engage using data (rather than hysterical rants about "da ebil shorts") is pretty much a confession []	https://twitter.com/jesse_brodtkin/status/1569024656702689280
287	9/12/2022	Adrian Heilbut	It is interesting that Wang is no longer trying to fabricate new data to deal with these.. Maybe CUNY has stuck a fork in that, or maybe Wang and his counsel now see the writing on the wall.. \$SAVA @jbeidel	https://twitter.com/Adrian_H/status/1569322745904906240
288	9/13/2022	Adrian Heilbut	I should never have doubted him, but Remi is proving himself capable of presenting a more vacuous talk at HCW than Shankar. \$SAVA \$OCGN "it worked.. but it didn't work" \$SAVA the data is all made up, but we have no debt	https://twitter.com/Adrian_H/status/1569777177222160384
289	9/13/2022	Adrian Heilbut	You'd think Lindsay would have made him practice, and she could have explained some of the fake \$SAVA science that Remi claims not to fully understand.	https://twitter.com/Adrian_H/status/1569840401493680128
290	9/13/2022	Jesse Brodtkin	you don't even need the two proteins measured. Protein 1 will diagnose AD with 100% accuracy.... it's amazing! (in a Theranos-kind of way 🤖) \$sava	https://twitter.com/jesse_brodtkin/status/1569803149229039626
291	9/14/2022	Jesse Brodtkin	Oh look, it seems that SavaDX collaborator Joel Ross is an admitted crook in the largest insider trade in history. A perfect fit for \$sava and Steve Arnold []	https://twitter.com/jesse_brodtkin/status/1570041764563525633
292	9/20/2022	Adrian Heilbut	\$SAVA chumps getting played again, with another pump based on two week old non-news The SEC did a major investigation, and is not going ahead with enforcement at the moment. Score one for the bulls. Remember the SEC closed early investigations into Madoff too. I suspect the SEC may revisit things after the other agencies investigating are done..	https://twitter.com/Adrian_H/status/1572268769765953536
293	9/20/2022	Adrian Heilbut	as with everything about \$SAVA, IT'S ALL MADE UP™	https://twitter.com/Adrian_H/status/1572321603341484035
294	9/21/2022	Adrian Heilbut	and FDA gets a lot of things wrong. Reality still exists. The drug is fake, Wang is a fraud, and the \$SAVA charade is going to come crashing down one of these days.	https://twitter.com/Adrian_H/status/1572445121509232643
295	9/21/2022	Adrian Heilbut	Play stupid games, win stupid prizes. All of these \$SAVA / Wang adjacent cheats and frauds are going to get hoist by their own petards. @MicrobiomDigest smacked down Talbot's pathetic excuses very effectively. The eraser tool artifacts are my favorite. https://pubpeer.com/publications/603286311C3DC6766716B01565CA72#13 didn't any of these people learn in kindergarten that you get in WAY MORE TROUBLE IF YOU KEEP LYING AFTER BEING CAUGHT? \$SAVA and that goes double if you continue to lie after being caught by the DOJ, @lindsaybbar @hoauyanwang \$SAVA what do you think, @jbeidel? From your SDNY experience, is lying to the FBI an effective strategy for somebody under criminal investigation?	https://twitter.com/Adrian_H/status/1572628086545387526
296	9/22/2022	Jesse Brodtkin	Nope, I mean fraud \$sava	https://twitter.com/jesse_brodtkin/status/1573053896326631426
297	9/23/2022	Jesse Brodtkin	"Falling off a cliff" describes what one could see as "non-responders" age and effect an ADAS-Cog score by TIME. But his implication (lie) is that this would be expected in the update, which will be adding more subjects (N=200, and he's seen this data), NOT more time 🤖 \$sava	https://twitter.com/jesse_brodtkin/status/1573395697373945856
298	9/26/2022	Jesse Brodtkin	Well \$dsgn is not the 5 alarm, screaming, in your face, insult to your intelligence FraudCo that \$sava is, but I think @AnsariLab owes us another round on explaining the issues. I mean this is @ScienceMagazine not some silly rag like @Sfntweets @MarinaP63[]	https://twitter.com/jesse_brodtkin/status/1574398726558334976

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299	9/27/2022	Adrian Heilbut	It doesn't halt cognitive decline either, I'm afraid, because all the 'science' behind it was faked by a crazy fabulist, and it is a completely imaginary drug that doesn't even engage its (never-validated) target. Congratulations to them.. has nothing to do with SAVA or their fake drug Simuflimflam has a totally different (imaginary) mechanism	https://twitter.com/Adrian_H/status/1574916368499195905
300	9/28/2022	Adrian Heilbut	nevermind the fraud thing[35]	https://twitter.com/Adrian_H/status/1575120477793689600
301	9/28/2022	Jesse Brodkin	If it binds to altered FLNA that stabilizes the altered form (equilibrium goes toward "altered").... that's how chemistry and thermodynamics work... ask any scientist if you don't believe me. \$sava has their story backwards * 🗑️	https://twitter.com/jesse_brodkin/status/1575145511576911878
302	9/28/2022	Jesse Brodkin	The \$sava jig is up. Now with a viable alternative in \$BIIB it's downright unethical for the FDA let this charade continue.	https://twitter.com/jesse_brodkin/status/1575155516137181185
303	9/29/2022	Jesse Brodkin	New news would be \$sava has reproduced their questionable scientific findings or put to bed the accusations of fraud, but alas despite a year of constant and numerous fraud revelations there is none of that []	https://twitter.com/jesse_brodkin/status/1575653611438108673
304	10/2/2022	Adrian Heilbut	Here's a question for Matt et al: IF it is the case that Simuflimflam is a completely imaginary drug based on fraudulent science and fantasies, is it acceptable (to patients, to investors, and to the regulatory and scientific system) to run and continue running Ph3 trials?	https://twitter.com/Adrian_H/status/1576587911860215813
305	10/2/2022	Adrian Heilbut	Be careful with this line of thinking. They HAVE been fabricating results, & the justification for the Ph3 was a charade. They're breaking critical scientific and ethical norms that enable human clinical research, as well as regulations. It's 100% made up scientific fraud. It does not matter if the fake drug is harmless. The patients in these trials are still taking risks (lumbar punctures) and not getting to try other trials that might work. Hundreds of millions of \$ will be wasted (and some getting shunted to Remi). Investors will be screwed. And they are destroying the integrity of the system that everybody is trying to honestly operate in. They're cheating on the exam. and, rather importantly for Drs. Wang and Burns, \$SAVA took \$20 million in grants from the NIH and taxpayers based on False Claims, and then fabricated their results in performance of that research	https://twitter.com/Adrian_H/status/1576669435146174464
306	10/2/2022	Adrian Heilbut	there's the Cambridge Mafia and Philly Mafia. Keep your BSD fraud networks straight. When they intersect, you get \$SAVA	https://twitter.com/Adrian_H/status/1576683023050760192
307	10/2/2022	Jesse Brodkin	You desires should be addressed to someone who has a fiduciary responsibility to you, like Remi. \$sava will be free to call whomever they like as experts or witnesses in court... this is Twitter []	https://twitter.com/jesse_brodkin/status/1576603337159426057
308	10/2/2022	Jesse Brodkin	The data manipulation techniques in publication are varied, but seem to have one thing in common: Wang (for \$sava communications add Remi and you've got all you need for a 100% fraudulent company)	https://twitter.com/jesse_brodkin/status/1576670820898074625
309	10/2/2022	Jesse Brodkin	For \$sava lies, this one is my favorite:	https://twitter.com/jesse_brodkin/status/1576671284012150784
310	10/2/2022	Jesse Brodkin	For just straight-up scientific illiteracy and insult-to-your-intelligence fraud, this one has got to take the top spot (and that's taken from a very rich \$sava data set 🤔)	https://twitter.com/jesse_brodkin/status/1576672703201042434
311	10/2/2022	Jesse Brodkin	That's the "redo" of the biomarkers... still the only data graphed in the \$sava slide deck (not even the OL anymore 🤔). My theory (now proven by Remi in the 100 patient cohort) is that the "first 50" numbers are BS... exactly how Remi did it * 🗑️ cherry-picking is one possibility	https://twitter.com/jesse_brodkin/status/1576674144917155840

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312	10/6/2022	Adrian Heilbut	SIMUFLIMFLAM: IT'S ALL MADE UP™	https://twitter.com/Adrian_H/status/1578081595172569092
313	10/6/2022	Jesse Brodtkin	For context; This guy has 33 flagged publications (almost as many as @CSOM_Official Wang of \$sava fraud fame) and is still soaking up federal research funds []	https://twitter.com/jesse_brodtkin/status/1578008530703073281
314	10/10/2022	Jesse Brodtkin	Nah Jacob is just an ignorant dufus who thinks he discovered the medical advance of the century hiding in a shitCo being run by a low-brow conman. I'm talking the whole BS \$sava story. It's been total unreproducible silly garbage for 20 years.	https://twitter.com/jesse_brodtkin/status/1579594273481449472
315	10/10/2022	Jesse Brodtkin	I can see how a \$sava long might take some solace in the SEC shitting the bed. It would make a subsequent indictment by DOJ unusual, but not even close to the unusualness of \$sava discovered a cure for AD, binds at femtomolar and defies the laws of thermodynamics etc Occam's raz	https://twitter.com/jesse_brodtkin/status/1579595876225675264
316	10/11/2022	Jesse Brodtkin	I don't think DOJ hired EXTRA people to investigate \$sava (probably hired consultants) I think Wang was in the compensation bonus pool. Whether Remi/Wang go to jail is really a question of how well they covered their tracks. What is not in question is that they did the crime.	https://twitter.com/jesse_brodtkin/status/1579897035360464896
317	10/11/2022	Jesse Brodtkin	You can search my timeline for lots of evidence, feel free to dispute any you like... I'd love to hear. This was the beginning of the \$sava scam escalation and always makes me laugh	https://twitter.com/jesse_brodtkin/status/1579905782539509761
318	10/12/2022	Jesse Brodtkin		https://twitter.com/jesse_brodtkin/status/1580350227189358593
319	10/16/2022	Adrian Heilbut	Who is crazy, who is stupid, who is lying, and who is evil is not really my concern. The drug is fake; the research was fake; it is all a charade. IT IS ALL MADE UP. \$SAVA	https://twitter.com/Adrian_H/status/1581794074545180672
320	10/19/2022	Adrian Heilbut	👁️ [37] The interesting thing is these guys were basically ripping off the trial sponsors. It's kind of unfathomable that a trial *sponsor* might deliberately (or even negligently) enroll subjects who fail to meet eligibility criteria or falsify subject laboratory results \$SAVA	https://twitter.com/Adrian_H/status/1582953383970734081
321	10/20/2022	Adrian Heilbut	You can get some real fraud art from https://fearlessdart.com @DonnaHWalker1Maybe she'll do a \$SAVA piece one day	https://twitter.com/Adrian_H/status/1582955379868446725
322	10/20/2022	Jesse Brodtkin	Very understated, imo: 2-3 Nobel prizes Rewrites pharm and chem textbooks \$1Trillion MC minimum Wang moves ahead of Salk, Edison, Einstein and Newton. OR \$sava is another silly Remi scam	https://twitter.com/jesse_brodtkin/status/1583230987500023809

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323	10/22/2022	Adrian Heilbut	SavaDx went off track as soon as they got anyone who wasn't Wang to try to produce data, because.. wait for it.. IT WAS ALL MADE UP (and utter nonsense to boot)	https://twitter.com/Adrian_H/status/1583904241608929280
324	10/23/2022	Adrian Heilbut	Indeed. I encourage everyone (FDA, SAVA, Nachtrab, Springer, and the 6 trolls in a trenchcoat) to do these experiments (and more) themselves.. nobody needs to take my word. But \$SAVA will never do it b/c they are scared to know the answer and kill their (imagined) deniability.[38]	https://twitter.com/Adrian_H/status/1584220440381517824
325	10/25/2022	Jesse Brodtkin	Hard to believe they messed up all 7 biomarker assays in all groups for \$sava.... Like REALLY hard to believe.	https://twitter.com/jesse_brodtkin/status/1584952417489391616
326	10/27/2022	Adrian Heilbut	Got to give Remi some credit, he found a General Counsel for \$SAVA with solid relevant experience.[41] ... Remi has run \$SAVA for 20 years without a pesky general counsel around to keep things honest. The ONLY reason for them to have hired THIS guy, right now, is that they are quaking in their boots because they fear they are about to go head-to-head with the DOJ.	https://twitter.com/Adrian_H/status/1585685914352746533
327	10/27/2022	Jesse Brodtkin	Remi knows where \$sava is heading, even if his cult doesn't ☹ [43]	https://twitter.com/jesse_brodtkin/status/1585629922147852288
328	10/27/2022	Jesse Brodtkin	\$sava will plead guilty, throw themselves on the mercy of the DOJ and hope to collect \$1m/yr and stay out of jail while they wind down ☐	https://twitter.com/jesse_brodtkin/status/1585631050994065408