Legal Backgrounder

Washington Legal Foundation
Advocate for freedom and justice®
2009 Massachusetts Avenue, NW
Washington, DC 20036
202.588.0302

Vol. 26 No. 14 June 17, 2011

MATRIXX UNBOUNDED: HIGH COURT'S RULING NEEDLESSLY COMPLICATES SCIENTIFIC EVIDENCE PRINCIPLES

by
Nathan A. Schachtman and David Venderbush

The United States Supreme Court recently decided a case that garnered a surprising amount of attention from a variety of disparate groups, including the Washington Legal Foundation. The Court's decision in *Matrixx Initiatives, Inc. v. Siracusano*[1] settled a circuit split on the use of bright-line tests for materiality and scienter in federal securities fraud litigation. This holding was accompanied by potentially troublesome *dicta* about statistical significance in medicine, litigation, and regulatory action.

Procedural Background. *Matrixx* is a securities fraud class action filed by investors against Matrixx Initiatives, Inc., a manufacturer of over-the-counter pharmaceutical products. The complaint alleged that the company violated federal securities laws by failing to disclose adverse event reports (AERs) and product liability lawsuits involving a possible link between Matrixx's Zicam Cold Remedy and loss of the sense of smell (anosmia). Plaintiffs claimed that those nondisclosures rendered the company's optimistic sales predictions and its denials of the possible link to anosmia misleading. The District Court granted Matrixx's motion to dismiss based on a failure to properly allege materiality and scienter. As to materiality, the District Court relied on a Second Circuit decision to hold that the alleged nondisclosures were not material as a matter of law because plaintiffs failed to allege a "statistically significant correlation between the use of Zicam and anosmia."[2]

The Ninth Circuit reversed, rejecting the statistical-significance materiality requirement, and concluding that the complaint adequately alleged "information regarding the possible link between Zicam and anosmia" that would have been significant to a reasonable investor.[3] As to scienter, the Circuit held that "[w]ithholding reports of adverse effects of and lawsuits concerning the product responsible for the company's remarkable sales increase is an extreme departure from the standards of ordinary care," thus giving rise to a strong inference of scienter.[4]

Supreme Court Holding. The Supreme Court agreed that the complaint was sufficient. Writing for a unanimous Court, Justice Sotomayor first addressed materiality and similarly rejected Matrixx's argument that "'adverse events reports that do not reveal a statistically significant increased risk to adverse events from product use are not material information'."[5] The Court held that Matrixx's proposed "bright-line rule" of statistical significance was incompatible with the Court's own holding in *Basic Inc. v. Levinson*, that "any approach that designates a single fact or occurrence as always determinative of an inherently fact-specific finding such as materiality, must necessarily be overinclusive or underinclusive."[6] Not content to rely on the categorical rejection of all categorical materiality tests, Justice Sotomayor set about in dictum to disprove Matrixx's "premise that statistical significance is the only reliable indication of causation."[7] After reviewing three expert testimony admissibility cases and FDA regulations, Justice Sotomayor concluded that because "medical professionals and

---

Nathan A. Schachtman is an adjunct faculty member at Columbia Law School and in private law practice in New York City. **David Venderbush** is counsel to the law firm Alston & Bird LLP in its New York City office. *The authors' views are their own and do not necessarily reflect those of WLF, their respective law firms or clients.*

regulators act on the basis of evidence of causation that is not statistically significant, it stands to reason that in certain cases reasonable investors would as well."[8] Finding that the information available to Matrixx "revealed a plausible causal relationship," the Court ruled that "the complaint alleges facts suggesting a significant risk to the commercial viability of Matrixx's leading product," which were material facts "necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading."[9]

Turning to scienter, the Court again rejected Matrixx's reliance on the lack of statistical significance to justify its nondisclosure, finding instead that the allegations created a "'cogent and compelling' inference that Matrixx elected not to disclose the reports of adverse event not because it believed they were meaningless but because it understood their likely effect on the market."[10]

Because the only issue before the Supreme Court was the propriety of the dismissal of the complaint, *Matrixx* does not provide guidance on substantive law regarding the admissibility or sufficiency of evidence.[11] *Matrixx* is solely a pleadings decision governing the standards for alleging materiality and scienter in a federal securities fraud action. The Court's surprising dictum on causation, no doubt encouraged by Matrixx's attempt to connect materiality with causation, is the focus of this LEGAL BACKGROUNDER.

The* Matrixx *Strategy: Materiality Equals Causation. Throughout the litigation, Matrixx argued that:

(a) materiality implies that the alleged facts must support a scientific conclusion of causation between the nondisclosed information and the outcome at issue;

(b) because statistical significance is the *sine qua non* of causality, materiality can be reduced to a bright-line test that requires allegations of "statistical significance"; and

(c) the AERs available to Matrixx at the relevant time were not statistically significant, but were merely isolated, hearsay, anecdotal reports.

Matrixx's strategic framing of materiality as requiring allegations of sufficient causation evidence, which could never be satisfied by "isolated hearsay reports of adverse events"[12] attracted several sympathetic friends of court.[13] To be sure, Matrixx and the *amici* are correct that AERs alone cannot, in most situations, support reliable causation conclusions. If that issue truly had been before the Court, then the alarmed *amicus* briefs would have been justified. In reality, however, Matrixx's strategy was flawed because scientific causation was never the important consideration for investors. Surely, reasonable investors would be justifiably interested in and concerned about regulatory action that could undermine or destroy sales by mandating product warnings or withdrawal. Indeed, attempting to limit materiality to facts sufficient for causality was wrong as a matter of regulatory law. The standard by which the FDA would evaluate Zicam was far lower than that required for scientific conclusions of causation. The FDA makes such decisions in the light of all available evidence, including evidence of adequate testing, safety, efficacy, and labeling.[14] Furthermore, unlike product liability actions, the drug sponsor has the burden of showing safety before the FDA. Matrixx argued that reasonable investors could not hold a company responsible for anticipating regulatory action merely because the FDA has broad, subjective discretion to regulate.[15] Although the FDA occasionally issues labeling and licensing decisions that give industry pause, the agency can hardly be described as routinely acting arbitrarily.

Materiality and Causation Uncoupled. A unanimous Court burst the illusion that causation was essential to the case, and the Court quickly dispatched Matrixx's assertion that plaintiffs had pleaded only isolated AERs. As the Court described, some of the AERs were delivered to Matrixx by clinicians as a "cluster" of patients within their direct clinical experience. The physicians who communicated their concerns had treated affected patients in whom they saw a pattern of acute pain preceding the onset of anosmia. This pattern had been reported before in reports of randomized clinical trials, dating back to the 1930s, when zinc sulfate was tested for prophylaxis against polio infection. In some of those trials, 25% of participants reportedly experienced anosmia.[16] These clinical trials were referenced by the physicians who communicated with Matrixx, as part of the basis for their concern about a causal connection. Matrixx failed in its attempt to avoid the polio trials as based on zinc sulfate while Zicam's active ingredient was zinc gluconate. Both are zinc compounds, which are soluble in water or biological fluids, and which release zinc ion as their active ingredient. The applicability of the polio trials to the cases at hand may ultimately have been questioned or found questionable at trial, but the clinicians' opinions, based in part upon the polio trials, were hardly "completely unfounded and misleading," as Matrixx had publicly stated.[17] Clinical trials, which sit atop the hierarchy of evidence, provide substantial evidence of causation, as well as support for a putative mechanism of causation. The physicians who

communicated with Matrixx had plausible, even if not incontrovertible, bases for their opinions.

Although the physicians who reported Zicam AERs may have lacked sufficient reliable evidence to support a claim of causation under federal and state law,[18] the sufficiency of their pleaded allegations, however, could not be turned into a test of the sufficiency of their evidence without transforming the motion to dismiss on the pleadings into a dispositive motion on the merits.

Matrixx's insistence that statistical significance should be a bright-line requirement was problematic. First, despite support in lower court decisions,[19] Matrixx's argument ran counter to Supreme Court precedent that the "entire mix" of information should be considered in determining materiality.[20] Second, the concept of statistical significance does not make sense in connection with the alleged AERs. Statistical significance comes into play only when the AER count, reported as a rate of events per unit time, is compared with an expected rate. If a company never analyzed the observed versus the expected AER rate, then it would never have the requisite statistical evidence to assess for statistical significance. If there were no expected baseline rate, then anecdotal case reports might be suggestive of causation. When there is some baseline rate of the same event in the population not taking the medication, then a rough comparison in rates can be made, and that comparison may or may not be statistically significant at some probability level. Such analyses, however, are subject to substantial biases from under- or over-reporting of AERs, and imprecision from estimating the baseline rate.[21] Even if such a statistical analysis were done, the result would likely not have been sufficiently reliable to support causality.[22] Therefore, the insistence upon statistical significance, even if interpreted sympathetically, would not have yielded the reliable causal connection that Matrixx wanted to import into the concept of materiality.

The Court adhered to its "whole mix" precedent and disapproval of bright-line tests, including requirements of "statistical significance."[23] Once the "whole mix" was at issue, the case for materiality improved considerably. The complaint alleged that Matrixx was speaking to the market about an over-the-counter product that made up the bulk of its sales. The undisclosed information was much more than isolated AERs. Furthermore, Matrixx had not conducted any of its own research to assess causality, and the available trials of Zicam were small and not designed to look for anosmia. In this context, Matrixx's projections of substantial increases in revenues, along with assertions that the claims of harm were "completely unfounded and misleading," made the failure to disclose medical evidence actionable under federal securities law. Thus, at bottom, *Matrixx* was a profoundly easy case to decide: Matrixx relied on a bright-line rule of statistical significance to test the materiality of a pharmaceutical company's nondisclosures despite the Supreme Court's disapproval of categorical materiality tests in *Basic*.

As a matter of precedent, *Matrixx* does not create new law, but merely reaffirms the Court's earlier rejection of bright-line materiality tests. For publicly traded companies and securities litigators, the holding here is plainly *not* that a few isolated, hearsay AERs require disclosure. Indeed, the Court emphasized that "application of *Basic*'s 'total mix' standard does not mean that pharmaceutical manufacturers must disclose all reports of adverse events."[24] Section 10(b) and Rule 10b-5(b) "do not create an affirmative duty to disclose any and all material information." "[C]ompanies can control what they have to disclose under these provisions by controlling what they say to the market."[25] A duty to disclose AERs thus cannot arise until a company speaks to the market about safety issues and company performance. The lesson of *Matrixx* is, of course, that even then the mere existence of AERs does not create a "bright-line" obligation to disclose.

Obiter Dictum. Notwithstanding the Court's limited holding in *Matrixx*, the opinion is worrisome for its broad dicta. Although the Court professed not to address the requisites of reliable evidence causation,[26] it weighed in anyway. The Court suggested that clinicians and the FDA make causal analyses without using statistical tests, when in reality, both groups usually base their actions on a prophylactic precautionary principle, rather than the kind of reliable causation conclusions required in tort actions.[27]

In addressing Matrixx's claim that statistical significance was necessary to determine causation, the Court also wandered into an immaterial discussion of the admissibility and sufficiency of expert testimony. For instance, in stretching to identify cases that addressed causation without statistical significance, the Court cited two cases on differential diagnosis.[28] Such cases, however, presuppose that the exposure or drug in question can cause the outcome, and proceed to inquire, by a process of elimination, what was the cause in an individual patient. Statistical significance never comes into play in such cases because general causation is presupposed.[29] The Court failed to take notice of its own general causation decision in *Joiner* disapproving expert reliance on studies that failed to reach statistical significant results.[30]

The Court also cited *Wells v. Ortho Pharmaceutical*.[31] But *Wells* also does not support the attempt to downplay the role of statistical significance because that case involved at least one study with a statistically significant association. Moreover, *Wells* was widely criticized by legal and medical writers,[32] and was subsequently distinguished by the same district court.[33] Indeed, *Wells* was an important impetus for the change in evidence law, both in the Supreme Court and in Congress. The *Matrixx* Court's approving citation to *Wells* on scientific evidence thus was jarring, akin to citing *Korematsu*[34] in a case about equal protection. The Court's attempt to salvage this derelict on the seas of expert witness jurisprudence is puzzling and disturbing.

The Supreme Court's *Daubert* project to have federal courts adhere to scientific principles is still less than twenty years old. Despite congressional approval of the *Daubert* amendments to Rule 702, many jurists still appear resistant. *Matrixx* raises a cautionary flag for all courts to pay closer attention to scientific issues.

ENDNOTES

[1] ___ U.S. ___, ___ , 2011 WL 977060 (Mar. 22, 2011) (hereafter cited as *Matrixx*).
[2] *Siracusano v. Matrixx Initiatives, Inc*., 2005 WL 3970117, *6 (D. Ariz. Dec. 15, 2005) (dismissing complaint).
[3] 585 F.3d 1167, 1180 (9th Cir. 2009).
[4] *Id*. at 1183.
[5] *Matrixx* at *7 (quoting Brief for Petitioners).
[6] 485 U.S. 224, 236 (1988).
[7] *Matrixx* at *9.
[8] *Id.* at *10.
[9] *Id.* at *7 (quoting 17 CFR § 240.10b-5(b)).
[10] *Id.* at *7 (quoting *Tellabs, Inc. v. Makor Issues and Rights, Ltd.*, 551 U.S. 308, 324 (2007)).
[11] *See, e.g., id*. at *9 (emphasizing that "we do not attempt to define here what constitutes reliable evidence of causation").
[12] Petitioner's Reply Brief at 15.
[13] *E.g.*, Product Liability Advisory Council, Pharmaceutical Research and Manufacturers of America, Defense Research Institute.
[14] *See* 21 U.S.C. § 355(d), (e) (requiring drug sponsor to show safety); 21 C.F.R. § 201.57(e) (requiring warnings in labeling "as there is reasonable evidence of an association of a serious hazard with a drug; a causal relationship need not have been proved.").
[15] Petitioner's Reply Brief at 15.
[16] Editor, *Zinc Sulfate Spray for Prevention of Poliomyelitis*, 1(4034) BRIT. MED. J. 953-54 (Apr. 30, 1938).
[17] *Matrixx* at *12.
[18] Matrixx correctly pointed out that clinicians often lack expertise to address causal questions. *See, e.g., Tamraz v. Lincoln Elec. Co*., 620 F.3d 665, 673 (6th Cir. 2010) (reversing admission of treating physician's causation testimony).
[19] *See In N.J. Carpenters Pension & Annuity Funds v. Biogen IDEC Inc*., 537 F.3d 35, 48 (lst Cir. 2008); *Avon Pension Fund v. Glaxosmithkline PLC*, 343 F. App'x 671, 672-73 (2d Cir. 2009); *Masters v. Glaxosmithkline*, 271 F. App'x 46, 50 (2d Cir. 2008); *In re Carter-Wallace, Inc. Sec. Litig*., 220 F.3d 36 (2d Cir. 2000); *Oran v. Stafford*, 226 F.3d 275, 284 (3d Cir. 2000).
[20] *Matrixx* at *10, citing *Basic Inc. v. Levinson*, 485 U.S. 224, 236 (1988).
[21] *See, e.g*., *In re Meridia Prod. Liab. Litig*., 328 F. Supp. 2d 791, 807 (N.D. Ohio 2004) ("[P]roportional reporting rate analyses are incomplete and often misleading … ."), *aff'd*, 447 F.3d 861 (6th Cir. 2006).
[22] *Id*.
[23] *Basic Inc. v. Levinson*, 485 U.S. 224, 236 (1988)
[24] *Matrixx at* *11.
[25] *Id.*
[26] *Id*. at *9
[27] *Rider v. Sandoz Pharm. Inc*., 295 F.3d 1194, 1201 (11th Cir. 2002) (FDA review "involves a much lower standard").
[28] *Matrixx* at *9, citing *Best v. Lowe's Home Centers, Inc*., 563 F.3d 171, 178 (6th Cir. 2009); *Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 263-64 (4th Cir. 1999).
[29] *Raynor v. Merrell Pharm. Inc.*, 104 F.3d 1371, 1376 (D.C. Cir. 1997).
[30] *General Elec. Co. v. Joiner*, 522 U.S. 136, 145 (1997).
[31] *Wells v. Ortho Pharmaceutical Corp*., 615 F. Supp. 262, 289 (N.D. Ga. 1985), *aff'd*, 788 F.2d 741 (11th Cir. 1986).
[32] *See, e.g.*, James Mills & Duane Alexander, *Teratogens and 'Litogens'*, 15 NE J. MED. 1234 (1986); Samuel Gross, *Expert Evidence*, 1991 WIS. L. REV. 1113, 1121-24 (1991).
[33] *Smith v. Ortho Pharmaceutical Corp*., 770 F. Supp. 1561 (N.D. Ga. 1991) (attempting to distinguish *Wells*).
[34] *Korematsu v. United States*, 323 U.S. 214 (1944)