IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS

NATCHITOCHES PARISH HOSPITAL SERVICE DISTRICT and JM SMITH CORPORATION d/b/a SMITH DRUG COMPANY on behalf of themselves and all others similarly situated, Plaintiffs, v. TYCO INTERNATIONAL, LTD.; TYCO INTERNATIONAL (US) INC.; TYCO HEALTHCARE GROUP LP; THE KENDALL HEALTHCARE PRODUCTS COMPANY, Defendants.	§ § § § § § § § § § § § § § § § § §	Civil Action No. 05-12024 PBS **JURY TRIAL DEMANDED**

**TYCO INTERNATIONAL (US) INC., TYCO HEALTHCARE GROUP LP, AND
THE KENDALL HEALTHCARE PRODUCTS COMPANY'S MOTION TO EXCLUDE
THE EXPERT REPORT AND OPINIONS OF DR. HAL SINGER**

[REDACTED VERSION]

TABLE OF CONTENTS

PAGE

TABLE OF AUTHORITIES

I. INTRODUCTION

Plaintiffs' putative damages expert, Dr. Hal Singer, intends to use a particular model equilibrium, referred to as the new empirical industrial organization (or NEIO) model, to estimate the amount of damages allegedly owed to the class in this matter.[1] Dr. Singer admitted in deposition that he is not aware of a single case in which this 20-year-old academic formulation has been used to estimate a defendant's damages at trial. But it is not merely the novelty of Dr. Singer's approach that renders it unsound. Dr. Singer also fails to recognize that the basic attributes of the sharps container industry make the NEIO model unfit for analyzing it.

Where expert testimony is insufficiently grounded in the facts at issue, it cannot meet the fundamental requirement that it must aid the jury in deciding the case. To the contrary, expert testimony that ignores salient facts, like Dr. Singer's, is likely to confuse and mislead the jury. As discussed below, two principal aspects of the sharps container market make the NEIO model inapposite: (1) sharps containers are heterogeneous and relatively differentiated products and (2) a substantial portion of sharps container sales are brokered through GPO contracts. Because of these facts, the NEIO model is not capable of capturing the true dynamics of this market and the results Dr. Singer derives from it are wholly misleading and should not be presented to the jury.

Accordingly, the Court should exclude Dr. Singer's testimony and opinions under Rule 702 of the Federal Rules of Evidence and the standards established in *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993).

---

[1] "Plaintiffs" are Natchitoches Parish Hospital Service District and JM Smith Corp. d/b/a Smith Drug Co.; "Covidien" means Tyco International (US) Inc., Covidien (formerly Tyco Healthcare Group LP), and The Kendall Healthcare Products Company.

II.   LEGAL STANDARDS

The standards mandating exclusion of Dr. Singer's report and testimony are straightforward. Because statements by a witness qualified by the court as an expert can carry great weight with the jury, "[e]xpert evidence can be both powerful and quite misleading . . . " *Daubert*, 509 U.S. at 595; *United States v. Monteiro*, 407 F. Supp. 2d 351, 358 (D. Mass. 2006) (Saris, J.) ("Simply put, expert testimony may be assigned talismanic significance in the eyes of lay jurors, and, therefore, the district courts must take care to weigh the value of such evidence against its potential to mislead or confuse.") (citation omitted). Under Federal Rule of Evidence 702, this Court must act as the gatekeeper to ensure that proposed expert testimony "is not only relevant but reliable" and that it "is sufficiently tied to the facts of the case [such] that it will aid the jury in resolving a factual dispute." *Daubert*, 509 U.S. at 589, 591 (internal citation omitted); *see also Bogosian v. Mercedes-Benz of N. Am., Inc.*, 104 F.3d 472, 476 (1st Cir. 1997) (court must "ascertain whether the testimony is helpful to the trier of fact, *i.e.*, whether it rests on a reliable foundation and is relevant to the facts of the case.") Accordingly, before allowing expert testimony to be heard, the Court must take great care to assure that (1) the putative witness is expertly qualified to opine on the relevant subject matter, (2) the reasoning and methodology underlying the proposed testimony is scientifically valid, and (3) the proposed testimony actually "fits" the contours of the case and can be properly applied to the facts in issue. *See Daubert*, 509 U.S. at 592-93; *Monteiro*, 407 F. Supp. 2d at 357-58. "Because the admissibility of all expert testimony is governed by the principles of Rule 104(a), the proponents of the expert testimony must establish these matters by a preponderance of the evidence." *Monteiro*, 407 F. Supp. 2d at 356 (citation and internal quotation marks omitted).

A court evaluating whether an expert's testimony "fits" the facts of the case must

determine if there is a "valid connection" between the "testimony and a disputed issue." *United*

States v. Shay, 57 F.3d 126, 133 n.5 (1st Cir. 1995); *see also Grimes v. Hoffmann-LaRoche, Inc.*,

907 F. Supp. 33, 35 (D.N.H. 1995) (noting that the "fit" requirement demands "a connection

between the expert's testimony and the facts of the case"). As this Court has held "it is the

court's responsibility to assure that the [expert's] opinion is properly grounded in fact." *Sutera*

v. The Perrier Group of Am., Inc., 986 F. Supp. 655, 661 (D. Mass. 1997) (Saris, J.); *Concord*

Boat Corp. v. Brunswick Corp., 207 F.3d 1039, 1056 (8th Cir. 2000) (excluding testimony in an

antitrust case where expert's predictions of market share were "not grounded in the economic

reality of the [relevant] market").

"'Fit' is not always obvious, and scientific validity for one purpose is not necessarily

scientific validity for other, unrelated purposes." *Daubert*, 509 U.S. at 591; *Shay*, 57 F.3d at 133

n.5 (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 743 (3d Cir. 1994), *cert. denied*, ---

U.S. ---- (1995)) (holding that expert testimony that chemical X causes cancer in animals is not

relevant to whether it also causes the disease in humans without reliable evidence that results

observed in the animal studies are transferable to humans). Thus, before a theory can be

presented to a jury for application to a particular case, the factual prerequisites of that theory

must be demonstrated. District courts in this Circuit have carefully examined the connection

between methodology and fact and have precluded testimony when that required link is broken.

See Kearney v. Phillip Morris, Inc., 916 F. Supp. 61, 67 (D. Mass. 1996) (excluding expert

testimony where the study the expert relied upon "is not one that produces findings that fit the

facts of the case"); *Grimes*, 907 F. Supp. at 38 (excluding expert testimony "notwithstanding [the

expert's] undeniable expertise" given that the theory expert was testifying about did not apply to

the factual scenario of the case). The First Circuit has also affirmed the exclusion of expert

witnesses where the "fit" between their testimony and the facts was lacking. *See, e.g., Vadala v.*

Teledyne Indus., Inc., 44 F.3d 36, 39 (1st Cir. 1995) (affirming exclusion of expert testimony

"not because of any flawed scientific principle" but because "there was no substantial basis" for

believing the necessary factual predicate even to apply the principle).

III.   DR. SINGER'S DAMAGES METHODOLOGY

Dr. Singer proposes to estimate aggregate damages to the class by way of the NEIO

model equilibrium. (12/18/07 Singer Expert Report ("Singer") ¶ 23 (Docket No. 136).)

According to Dr. Singer, "[t]he NEIO model shows the relationship between several market

characteristics, including: (1) market demand elasticity, (2) seller concentration indices,

(3) producer price-cost margins, and (4) the extent to which manufacturers act competitively."

(*Id.* ¶ 27.) Although the relationship between these variables posited in the model was devised at

least as early as 1989, (*id.* n.64), Dr. Singer testified in deposition that he did not know whether

the NEIO model had *ever* been used to estimate damages at a trial. (Ex. C at 31:17-24, 35:17-

36:7.)[2] Indeed, the only two litigations in which he was aware it was used at all were both cases

in which he was involved as a testifying or consulting expert. (*Id.* at 25:18-27:21, 31:17-34:7,

37:20-38:9.)[3]

To apply the NEIO model, Dr. Singer used documents and data obtained in discovery to

estimate the sharps container industry's level of "seller concentration" (*i.e.*, whether substantial

market shares are concentrated in only a few sellers or whether they are highly dispersed among

---

[2] All references to an exhibit ("Ex.") refer to the lettered exhibits attached to the concurrently
filed Declaration of Jeffrey M. Gutkin.

[3] Covidien notes that, as of the time of his deposition, Dr. Singer had never given expert
testimony at a trial. (Ex. C at 15:12-15.)

many), Covidien's price-cost margins and the industry elasticity of demand.[4] With these figures, Dr. Singer sought to "solve for" the final variable in the equilibrium, the so-called "conduct parameter," which he claims mathematically represents the manner in which the rivals compete with each other.

Dr. Singer claims that, after he fills in the variables and completes the equilibrium, he can change any one of the variables and predict how such a change would effect the others. In this case, Dr. Singer used Prof. Elhauge's estimates of the alleged foreclosure of Covidien's rivals resulting from the challenged conduct to calculate how much lower seller concentration would have been in a "but-for world" without that conduct. He then assumed the elasticity and the conduct parameter would remain constant and computed how far but-for world margins would have to fall to be in equilibrium in light of the lowered seller concentration. Dr. Singer claims that knowing the percentage drop in but-for world margins allows him to estimate the average percentage drop in industry prices in the but-for world, which he then multiplied by Covidien's sharps container revenues to determine the aggregate amount of damages allegedly owed to the class.

_____

[4] Although Dr. Singer devotes a substantial portion of his report to estimating elasticity, the alleged level of elasticity in the market ultimately has no impact on the quantum of damages he computes. (1/31/2008 Guerin-Calvert Expert Report ("Guerin-Calvert") ¶ 145-47 (Docket No. 132, Exhibit. B).) What's more, Dr. Singer's finding that demand for sharps containers is "negative and elastic" is, at best, counterintuitive. Such a finding implies the dubious proposition that a 10% rise in sharps container prices will cause buyers to lower their purchases of sharps containers by more than 10%. This seems quite improbable given the various governmental mandates on sharps disposal and a healthcare facility's relative lack of control over the volume of items requiring disposal it generates.

IV. ARGUMENT

A. Dr. Singer Employs A Homogeneous Products Model, But Sharps Containers Are Decidedly Not Homogeneous

In his opening report and in deposition, Dr. Singer admitted that the version of the NEIO model he selected is able to accommodate only homogenous or slightly differentiated product markets. (Singer ¶ 19; Ex. C at 148:21-24 ("Q: You applied the homogeneous product version of the NEIO model in your analysis of this case, correct? A. Correct.").) Dr. Singer selected this variety of the NEIO model because he believes that sharps containers are homogenous, commodity products. (Singer ¶ 19; Ex. C at 148:17-20.) However, Dr. Singer ignores clear evidence, in the record, which is set forth in Ms. Guerin-Calvert's report, showing that sharps containers are far from homogeneous.

As the evidence shows, sharps containers are differentiated along several dimensions. Dr. Singer admits that sharps containers are differentiated into categories according to the type of application for which they are intended: in-room, multi-use, large volume, chemotherapy, phlebotomy and pharma. (Guerin-Calvert ¶¶ 126-28; Singer Tbl. 1.) Containers also cover a very wide range of sizes from less than 1 quart up to 30 gallons. (Singer Tbl. 1.) Inexplicably, Dr. Singer characterizes these differences in size as "subtle." (Singer ¶ 18.) Containers are further differentiated by other important features, such as their lid type, which determines how the container will be used and the likelihood that it will prevent accidental needle sticks. (Guerin-Calvert ¶¶ 133-34.) Sharps containers are also differentiated by whether they are disposable (such as the containers sold by Covidien and Becton Dickinson) or reusable (such as those from Stericycle and Daniels), and individual customers may prefer one or the other of the options for a variety of reasons. (*Id.* ¶ 131.) Ms. Guerin-Calvert also demonstrated that the

breadth of the products offerings differed between the sharps container rivals, with Covidien having the broadest product range. (*Id.* ¶ 128-29.)

The scope of product heterogeneity is firmly verified by the outcomes in the marketplace. Ms. Guerin-Calvert examined the actual prices and sales volumes of various Covidien and Becton Dickinson containers that were comparable in size and product type and were sold under the same GPO contract. (*Id.* ¶ 132-35.) This evidence revealed that more expensive containers frequently outsell less expensive alternatives. For example:

(*Id.* ¶¶ 133-34 (emphasis added); *see also* Guerin-Calvert App'x. 9, Tbls. 6 & 7 showing numerous additional examples of this same pattern.) These data prove, from an economic perspective, that differentiation substantially impacts buyer choice. In deposition, Dr. Singer testified that "when products are homogeneous, all else being equal, less expensive products will tend to out sell more expensive products." (Ex. C at 170:11-15.) Yet, his reply report offers absolutely no explanation for how the record in this case shows that more expensive, allegedly homogeneous products far outsell less expensive options. Dr. Singer's silence regarding these facts is telling.

Ms. Guerin-Calvert specifically evaluated whether Dr. Singer's expression of the NEIO model can accommodate the heterogeneity of the products in this industry and concluded that it cannot. (Guerin-Calvert ¶¶ 136-43.) Dr. Singer had suggested that he could "easily" adapt his NEIO model to accommodate product heterogeneity, if he became convinced that such heterogeneity existed. (Singer ¶ 19.) Ms. Guerin-Calvert responded in her report as follows:

> Dr. Singer states in his report that the basic model he employs to estimate damages could "easily" be adapted to account for sharps containers being highly differentiated. ([Singer] ¶ 19.) I have reviewed the article Dr. Singer cites in support of his statement, and find that the models that accommodate product differentiation presented in that article are significantly more complex than the simple model employed by Dr. Singer. Reviewing that article does not suggest to me any simple approach to adapting Dr. Singer's model to a differentiated product market. If there is such an approach, I cannot address it at this time because Dr. Singer has provided no guidance as to what it may be. Furthermore, there is no reason that the results from the simple model would suggest anything about the results that would be obtained from a more complex model.

(Guerin-Calvert n.200.) Despite this invitation to elaborate on how a heterogeneous product model could be devised and applied in this matter, Dr. Singer provided no further description of this supposedly easily available alternative in his reply report. Dr. Singer's homogeneous product model is the only one he offers for all of plaintiffs' damages claims.

In light of the fatal lack of fit between Dr. Singer's theory and the facts of the sharps container market, this Court should exclude Dr. Singer's report, opinions and testimony from this case. *Concord Boat Corp.*, 207 F.3d at 1056.

B.   The Underlying Premise Of The NEIO Model Is Inapposite In A GPO Market In Which Higher Seller Concentrations And Lower Prices Go Hand-in-Hand

The NEIO model does not fit the facts of the case here in another vital respect. Dr. Singer seeks to impose the various presumptions regarding market dynamics embodied in the NEIO model on the sharps container industry. Although he admits that he is not aware of a single instance in which this 20-year-old academic formulation has been used to quantify

damages at a trial, he claims that it will do so accurately here. He claims that the model's generic predictions about the relationships between seller concentrations, elasticity and margins will necessarily hold true for the sharps container industry. But Dr. Singer ignores one of the defining characteristics of the industry, which makes the NEIO model inapplicable to it -- a large portion of sharps container sales are brokered through GPO contracts.

As both of Covidien's economists demonstrated by reference to the evidence, suppliers in the sharps container industry engage in significant *ex ante* competition to obtain positions on GPO contracts. (Guerin-Calvert ¶¶ 49-61; 1/31/2008 Ordover Expert Report ("Ordover") ¶¶ 44-46; 78-82; Fig. 1 (Docket No. 132, Exhibit A).) Because GPOs aggregate the buying power of their members, they command substantial bargaining power. (*Id.*) GPOs then leverage this power to the benefit of their members by forcing would-be suppliers to participate in head-to-head competition (on both quality and price) to obtain GPO endorsements. (*Id.*) The results of this process are: 1) prices that, for many GPO buyers, are below any price they could hope to obtain individually and 2) pre-negotiated contracts for the selected vendors to offer to the GPO's members. Thus, the GPO contract bid process can lead to higher, but perfectly legitimate seller concentrations *and* lower prices than would be possible without GPOs.[5] (Guerin-Calvert ¶¶ 23, 80-85 (describing these market dynamics).)

As this dynamic indicates, the fundamental assumption of the NEIO model -- that higher seller concentrations and lower prices cannot coincide – conflicts with the facts of this market. In the NEIO model, a positive correlation between seller concentrations and margins is *assumed*. That is, as seller concentration falls and market shares become more evenly spread between the

---

[5] Even Prof. Elhauge agrees that GPOs help their buyers to pool their buying power to obtain lower prices. (Ex. A at 82:15-22, 161:2-163:13).

rivals in the market, it is mathematically certain that the model will predict that prices will also fall.[6] Plaintiffs have adduced no evidence that the NEIO model was ever intended to be used to estimate antitrust damages in any context, but it is quite clear that the model, by the inherent constraints of its design, is fundamentally unsuitable in a market where relatively higher seller concentrations and lower prices prevail. The model simply has no flexibility to accommodate the actual contours of this market.

For this reason, the NEIO model should be excluded on the grounds the Eighth Circuit found to be dispositive in its ruling in *Concord Boat Corp.* In that case, the plaintiff boat builders argued, as Plaintiffs do here, that certain share-of-purchase discounts the defendant offered were foreclosing competition. 207 F.3d at 1054. The plaintiffs' expert opined that, but for these anticompetitive discounting practices, the distribution of market shares among the competing suppliers would have followed the dictates of an academic theory of competition known as the Cournot model. *Id.* at 1046-47. The Eighth Circuit cautioned that "[i]n recent years the Supreme Court has put renewed emphasis on the importance of the 'fit' of an expert's opinion to the data or facts in the case." *Id.* at 1055. Under this standard, the Court ruled that the expert's predictions were "not grounded in the economic reality of the [relevant] market," and, therefore, his testimony was not reliable. *Id.* at 1056.[7] Here too, Dr. Singer's selection of a generic academic formula that does not accommodate the realities of competition in a GPO market renders his testimony unreliable and inappropriate for presentation to the jury.

---

[6] Because Dr. Singer holds costs constant in the actual and but-for worlds, changes in margins necessarily translate directly into changes in price.

[7] *See, e.g., Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993) ("Expert testimony is useful as a guide to interpreting market facts, but it is not a substitute for them."); *West v. Prudential Sec., Inc.*, 282 F.3d 935, 939 (7th Cir. 2002) (stating in reference to an expert's opinion "[d]ata may upset theory") (Easterbrook, J.); *SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp.*, 188 F.3d 11, 23-25 (1st Cir. 1999) (holding that an expert's hypothesis cannot be accepted if it is not validated by the facts of the case).

V. CONCLUSION

For these reasons, Covidien respectfully requests that the Court exclude the reports, opinions and testimony of Dr. Hal Singer.

Dated: October 17, 2008

Respectfully submitted,

/s/ *James Donato*
COOLEY GODWARD KRONISH LLP
James Donato (SBN: 146140)
101 California Street, 5th Floor
San Francisco, CA 94111
Telephone: (415) 693-2000
e-Mail: jdonato@cooley.com

COOLEY GODWARD KRONISH LLP
Donald K. Stern (BBO: 479420)
The Prudential Tower
800 Boylston Street, 46th Floor
Boston, MA 02199
Telephone: (617) 937-2300
e-Mail: dstern@cooley.com

TYCO HEALTHCARE GROUP LP
John M. Griffin (BBO:549061)
Marc A. Polk (BBO: 631765)
15 Hampshire Street
Mansfield, MA 02048
Telephone: (508) 261-8480
e-Mail: john.griffin@tycohealthcare.com
e-Mail: marc.polk@tycohealthcare.com

COOLEY GODWARD KRONISH LLP
Linda Callison (SBN: 167785)
Margaret Branick-Abilla (SBN: 223600)
Five Palo Alto Square
3000 El Camino Real
Palo Alto, CA 94306
Telephone: (650) 843-5000
e-Mail: lcallison@cooley.com
e-Mail: mbranickabilla@cooley.com

GIBSON DUNN & CRUTCHER LLP
Christopher D. Dusseault (SBN: 177557)
333 South Grand Ave.
Los Angeles, CA 90071-3197
Telephone: (213) 229-7000
e-Mail: CDusseault@gibsondunn.com

Attorneys for Defendants
TYCO INTERNATIONAL (US) INC.;
TYCO HEALTHCARE GROUP LP;
THE KENDALL HEALTHCARE
PRODUCTS COMPANY

CERTIFICATE OF SERVICE

I hereby certify that the foregoing was filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and copies will be sent to those indicated as non-registered participants on October 17, 2008

/s/ _James Donato_
James Donato