Hoardig Away Science: Towards a More Transparent View of Health and Online Registries for Independent Postmarket Drug Research

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The “scientific method” venerated by lawyers and judges consists in great measure of the allegiance of those we call “scientists” to the principle that only those results capable of replications through independent investigation can justify acceptance as scientific “truth”.1

I. INTRODUCTION

In 2004, newspaper headlines read “Major Pharmaceutical Firm Concealed Drug Information” after New York Attorney General Eliot Spitzer alleged that GlaxoSmithKline, PLC (GSK) engaged in misleading and fraudulent conduct with respect to its antidepressant Paxil.2 Mr. Spitzer claimed GSK misled consumers and healthcare providers by disseminating only information on its positive clinical trials, despite GSK’s disclosure of the results of all of its pediatric trials to the Food and Drug Administration (FDA) and presentation of the available results of its negative and inconclusive studies at medical conventions.3 Three months after the suit was filed, GSK settled with the New York Attorney General. The company agreed to pay $2.5 million and to disclose information from all clinical trials conducted after 2000 through a clinical trial registry, which GSK had developed before it reached the settlement.4

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1 Ruffin v. Shaw Indus., Inc., 149 F.3d 294 (4th Cir. 1998).
The company responded that the pediatric studies had, in fact, been “made available to FDA and regulatory agencies worldwide” and that the company had “acted responsibly in conducting clinical trials in pediatric patients, and disseminating data from those studies.” For example, the clinical trial results for the drug were submitted to FDA, the United Kingdom’s Medicine and Healthcare Products Regulatory Agency (MHRA), and the European Agency for the Evaluation of Medicinal Products (EMEA). In connection with those submissions, the complaint alleged that the drug company had admitted that three of the studies “failed” to demonstrate that the drug was more effective than placebo, “and so do not provide strong evidence of efficacy in this indication.” Based on their own reviews of the data, the United Kingdom and Ireland both required contraindications in the drug labeling. They determined that the drug “should not be used in children and adolescents under the age of eighteen years to treat depressive illness.” In response to British and Canadian regulatory actions, the drug company also sent letters to physicians in those countries, advising them that the clinical trials had failed to demonstrate the efficacy of the drug for major depressive disorder in the pediatric population and that there had been a doubling of adverse events with the study drug. (Footnotes omitted). Dorfman & Reig, supra note 3, at 598.
After the GSK settlement, FDA came under increasing pressure to regulate not only what drug manufacturers do say about their clinical trials, but also what is left unsaid. With the increased availability of medical information through the Internet, consumer advocacy groups, journal editors, academia, and government organizations called on pharmaceutical companies to release all results from their clinical trials on a drug, whether positive or negative.

The call for greater transparency reflects the public’s belief that by making clinical trial information available online, consumers—together with their doctors—can make better-educated decisions about the risks and benefits of a prescribed drug. Moreover, the initiative reflects the globalization of information through the Internet. For consumers, the Internet has become a source of medical information for approximately seventy-four percent of adults in the United States and it is predicted that 88.5 million people will go online in 2005 for health information. Information about diseases and drugs already are the most sought-out categories on the Internet. Indeed, the Internet is on its way to becoming the greatest source of health information within this decade. As George F. Will has stated, “It is no exaggeration to conclude that the Internet has achieved, and continues to achieve, the most participatory marketplace … this country—and indeed the world—has yet seen.”

While the Internet gives consumers access to a greater quantity of medical information, there is no assurance that the information available is reliable or unbiased. For example, investigations by independent researchers about the effects of a drug after its approval have the power to influence the public to take a drug promising a miracle, or to refuse treatment based on an unproven side effect. A variety of organizations and individuals, in addition to pharmaceutical companies, perform and sponsor postmarket clinical investigations and epidemiological studies on drugs. Unlike investigators associated with prescription product manufacturing, however, these investigators often escape, and indeed resist, a call for transparency in their research. Both the consuming public and healthcare providers often fail to consider the accuracy and truthfulness of published medical information, regardless of its source.

All biomedical research that comments on the safety and effectiveness of postmarketed drugs should be displayed in an online registry for public scrutiny to allow patients and their providers to fully understand the benefits as well as the potential consequences of taking a certain drug. Without such access, uninformed, and perhaps injurious, deci-

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5 For purposes of this article, “clinical trials” is used broadly; much in the way described by GSK on its website (“GSK-sponsored trials are those for which GSK is ultimately responsible for all aspects of the study (e.g., regulatory approvals, site selection, protocol development, initiation, monitoring, safety reporting, and data analysis), even if some or all of these activities are transferred to another party”). See GSK, Clinical Trials Register, at http://ctr.gsk.co.uk/welcome.asp (last visited Dec. 1, 2005).

6 See, e.g., Federal Food, Drug, and Cosmetic Act (FDCA), 21 U.S.C. § 352(n) (mandating that an advertisement for a prescription drug must contain “true statements … relating to side effects, contraindications … and effectiveness … . The information relating to side effects and contraindications shall disclose each specific effect contained in required, approved, or permitted labeling”).


8 Wood & Dorfman, supra note 7, at 143. The interest in use of the Internet to disseminate information regarding health issues has led to the creation of a specialty online journal that studies this trend. See Journal of Medical Internet Research, at www.jmir.org (last visited Dec. 1, 2005).

sions may be made by patients and healthcare providers alike. If such research can be concealed, it also may have the effect of fueling unmeritorious product liability litigation, and the type of fraud and abuse claims such as the suit against GSK involving Paxil. Part II of this article briefly summarizes FDA’s current process for approving a drug and proposals made by the American Medical Association (AMA), FDA, and Senators Chuck Grassley and Christopher Dodd to make drug research more transparent on the Internet. This part also highlights FDA’s limited focus on research and the agency’s ignorance of the effect of unregulated, published postmarket research on public health and the litigation budgets of prescription product manufacturers. Part III analyzes the health- and litigation–related consequences that can arise when independent postmarket research is not disclosed to the public and suggests that, as is the case with company-sponsored clinical trials, such research also should be subject to online transparency. Part IV examines organizations that recognize the influence of all postmarket research on the American public and take an expansive approach to online transparency. Finally, Part V proposes that, even in view of First Amendment concerns, independent researchers and institutional review boards (IRBs) should be obligated to disclose their postmarket drug research online.

II. THE CALL FOR TRANSPARENCY

A. FDA’s Approval Process

A complex and exhaustive drug approval process has evolved gradually over the past century. The Food and Drug Act of 1906 was the first substantial drug law passed by Congress. This act prohibited interstate commerce in misbranded and adulterated foods, drinks, and drugs, and set the initial standard for drug purity, strength, and quality. Thirty-two years later, the Federal Food, Drug, and Cosmetic Act of 1938 (FDCA) required evidence that a product was safe before it could be marketed to the public. Not until the Kefauver-Harris Drug Amendments in 1962, however, did FDA require drug makers to show “substantial evidence” that a drug was both safe and effective through “adequate and well-controlled investigations” before it could be marketed. Today, a manufacturer or investigator must provide evidence of a drug product’s safety and effectiveness through clinical trials before its new drug application (NDA) is approved for marketing.

A pharmaceutical company begins its pursuit of FDA approval by testing a new drug on animals to gather preliminary data on the drug’s safety and effectiveness. If the data

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11 CENTER FOR DRUG EVALUATION AND RESEARCH (CDER), FDA, FROM TEST TUBE TO PATIENT: IMPROVING HEALTH THROUGH HUMAN DRUGS (SPECIAL REPORT) 4 (1999), available at http://www.fda.gov/cder/about/whatwedotesttube.pdf (last visited Dec. 1, 2005) [hereinafter FDA, FROM TEST TUBE TO PATIENT].
13 FDA, FROM TEST TUBE TO PATIENT, supra note 11, at 4. The law was passed in response to the discovery that thalidomide was associated with birth defects. See Charles J. Walsh & Alissa Pyrich, Rationalizing the Regulation of Prescription Drugs and Medical Devices: Perspectives on Private Certification and Tort Reform, 48 RUTGERS L. REV. 883, 896 & n.36 (1996).
is encouraging and the company decides to proceed, it submits two formal applications, the investigational new drug (IND) application and then an NDA. Three distinct phases of clinical testing occur during the IND process. Phase I studies usually are conducted with no more than twenty to 100 disease-free volunteers to establish dosing parameters. Phase II studies are randomized, controlled clinical trials that generally use 100 too 300 human subjects with the disease or disorder that is the target of the therapy. Phase III studies are larger and better-controlled trials than Phase II that test for both safety and efficacy. FDA defines these three testing phases as:

Phase 1 includes the initial introduction of an investigational new drug into humans. These studies are usually conducted in healthy volunteer subjects. These studies are designed to determine the metabolic and pharmacological actions of the drug in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness. Phase 1 studies also evaluate drug metabolism, structure-activity relationships, and the mechanism of action in humans. The total number of subjects included in Phase 1 studies is generally in the range of twenty to eighty.

Phase 2 includes the early controlled clinical studies conducted to obtain some preliminary data on the effectiveness of the drug for a particular indication or indications in patients with the disease or condition. This phase of testing also helps determine the common short-term side effects and risks associated with the drug. Phase 2 studies usually involve several hundred people.

Phase 3 studies are intended to gather the additional information about effectiveness and safety that is needed to evaluate the overall benefit-risk relation-

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15 INDs are regulated under 21 C.F.R. § 312.1 (2005) As noted by FDA:
There are three IND types:

An Investigator IND is submitted by a physician who both initiates and conducts an investigation, and under whose immediate direction the investigational drug is administered or dispensed. A physician might submit a research IND to propose studying an unapproved drug, or an approved product for a new indication or in a new patient population.

Emergency Use IND allows FDA to authorize use of an experimental drug in an emergency situation that does not allow time for submission of an IND in accordance with 21 CFR, Sec. 312.23 or Sec. 312.34. It is also used for patients who do not meet the criteria of an existing study protocol, or if an approved study protocol does not exist.

Treatment IND is submitted for experimental drugs showing promise in clinical testing for serious or immediately life-threatening conditions while the final clinical work is conducted and FDA review takes place.

There are two IND categories:
Commercial
Research (non-commercial).


17 FDA's comprehensive reference resource for clinical trials can be found at FDA, Clinical Trials, at http://www.fda.gov/ohsi/clincitaltrials/default.htm (last visited Dec. 1, 2005).

18 Id.; see AMERICAN MEDICAL ASSOCIATION (AMA) COUNCIL ON SCIENTIFIC AFFAIRS, ENHANCED PHYSICIAN ACCESS TO FOOD AND DRUG ADMINISTRATION DATA (2005), available at http://www.ama-assn.org/ama/pub/category/15152.html (last visited Dec. 1, 2005) [hereinafter AMA REPORT].
ship of the drug. Phase 3 studies also provide an adequate basis for extrapolating the results to the general population and transmitting that information in the physician labeling. Phase 3 studies usually include several hundred to several thousand people.\textsuperscript{19}

Once all three phases of the IND process are complete and the data successfully demonstrate both the drug’s safety and effectiveness, the applicant seeking approval to market a drug then files an NDA with FDA.\textsuperscript{20}

An NDA is a compilation of all of the information obtained during the IND phase.\textsuperscript{21} It also includes toxicology studies, literature searches, and other relevant material. NDAs typically run 100,000 pages or more.\textsuperscript{22} The goal of the NDA is to provide the agency with enough information to permit the FDA reviewer to reach the following key decisions.

- Whether the drug is safe and effective in its proposed use(s), and whether the benefits of the drug outweigh the risks.
- Whether the drug’s proposed labeling (package insert) is appropriate, and what it should contain.
- Whether the methods used in manufacturing the drug and the controls used to maintain the drug’s quality are adequate to preserve the drug’s identity, strength, quality, and purity.\textsuperscript{23}

Once the NDA is approved, the applicant usually is not required to conduct postapproval studies.\textsuperscript{24} Instead, FDA maintains two adverse events reporting systems incorporated under MedWatch to monitor any possible adverse reactions.\textsuperscript{25} One system requires IND and NDA holders, and certain specified distributors, to report adverse events to FDA according to MedWatch’s requirements.\textsuperscript{26} The second system is a voluntary adverse event reporting system for healthcare professionals, consumers, and patients. FDA has defined the goal of the MedWatch system as follows:

> FDA has the responsibility for assuring the safety and efficacy of all regulated marketed medical products.

MedWatch, The FDA Safety Information and Adverse Event Reporting Program, serves both healthcare professionals and the medical product-using public. We provide important and timely clinical information about safety issues involving medical products, including prescription ... drugs.\textsuperscript{27}

\textsuperscript{19} \textit{Id.}
\textsuperscript{20} \textit{Id.}
\textsuperscript{21} 21 C.F.R. § 314.1.
\textsuperscript{24} One exception is for drugs that are the subject of “fast-track” regulations (i.e., fast-track products, approved on an accelerated basis, and products for which safe use in children needs to be determined or more clearly defined). \textit{See Report 6, in AMA REPORT, supra note 18.}
\textsuperscript{25} \textit{See FDA, MedWatch, at \texttt{http://www.fda.gov/medwatch} (last visited Dec. 1, 2005).}
\textsuperscript{26} FDA, \textit{FROM TEST TUBE TO PATIENT, supra note 11, at 54-60. The reporting requirements for drugs are contained within Title 21 of the Code of Federal Regulations. Section 310.305 addresses records and reports concerning adverse drug experiences on marketed prescription drugs for human use without approved new drug applications; section 312.32 addresses IND safety reports; and postmarketing reporting of adverse drug experiences is addressed in section 314.80.}
\textsuperscript{27} FDA, \textit{What is MedWatch?, at \texttt{http://www.fda.gov/medwatch/What.htm} (last visited Dec. 1, 2005).}
Throughout the IND, NDA, and MedWatch processes, FDA adheres to strict policies of confidentiality. For example, FDA’s general policy is not to divulge trade secret or confidential information without the applicant’s permission. Over the years, however, consumers and healthcare providers have asked that more information be provided about the status of clinical trials, as well as adverse event reports, so that they can make, what they believe are, better-informed decisions about the uses of therapies.

B. Calls for Disclosure of Clinical Trial and Postmarket Research Post-GSK

After GSK’s settlement with New York State’s Attorney General, numerous groups criticized the largely voluntary nature of FDA’s postmarket surveillance process. In June 2004, AMA advocated greater transparency in clinical trials. AMA proposed that the Department of Health and Human Services (HHS) establish a mandatory national registry for all clinical trials conducted in the United States. AMA’s Council on Scientific Affairs (CSA) put forth several recommendations, including:

The registry should include phase 2 and 3 clinical trials in support of a new drug, biologic, or device application, and postmarket surveys and other studies designed to test a therapeutic intervention.

It should include identifying information such as the trial sponsor’s name, sources of funding, a unique identifier, and contact information for the persons responsible for the clinical trial.

It should include details such as the trial purpose and objective, the study design, the population and diseases under study, and the dates the trial began and ended in a simple, easy to understand format.

Clinical trial results should be made publicly available. A centralized clinical trial registry should offer an efficient link to published journal articles or clini-

28 See 21 C.F.R. § 20.61, Trade secrets and commercial or financial information which is privileged or confidential.  
(a) A trade secret may consist of any commercially valuable plan, formula, process, or device that is used for the making, preparing, compounding, or processing of trade commodities and that can be said to be the end product of either innovation or substantial effort. There must be a direct relationship between the trade secret and the productive process.  
(b) Commercial or financial information that is privileged or confidential means valuable data or information which is used in one’s business and is of a type customarily held in strict confidence or regarded as privileged and not disclosed to any member of the public by the person to whom it belongs.  
(c) Data and information submitted or divulged to the Food and Drug Administration which fall within the definitions of a trade secret or confidential commercial or financial information are not available for public disclosure.  
(d) A person who submits records to the Government may designate part or all of the information in such records as exempt from disclosure under exemption 4 of the Freedom of Information Act. The person may make this designation either at the time the records are submitted to the Government or within a reasonable time thereafter. The designation must be in writing. Where a legend is required by a request for proposals or request for quotations, pursuant to 48 CFR 352.215-12, then that legend is necessary for this purpose. Any such designation will expire 10 years after the records were submitted to the Government.

29 See AMA REPORT, supra note 18.
Under AMA’s proposal, all clinical trial results pertaining to a new drug before and after a manufacturer puts it on the market would be available online to the public and thus, effectively, worldwide.

Following the GSK-Paxil controversy, FDA also responded to the call for transparency by announcing in February 2005 that it would establish the Drug Safety Oversight Board (DSOB). One of the DSOB’s primary responsibilities is to create and oversee DrugWatch, an online website intended to identify the drugs FDA is evaluating for significant emerging safety issues. As mentioned, FDA already maintains one online reporting system, MedWatch. Currently, under MedWatch, FDA requires NDA holders, manufacturers, and distributors of drugs—and encourages healthcare providers—to report adverse events that occur in connection with the administration of a drug to a patient. On the DrugWatch site, FDA intends to not only list the adverse events reported on MedWatch, but also will alert the public if the agency is investigating the drug at issue. The website will describe whether it has found a causal relationship between an adverse event and a drug, and will provide updated information on how a drug should be prescribed, dispensed, or used.


32 FDA’s Drug Safety website states: FDA is launching a new program to make drug safety information available to you in an easily accessible format. Because patients are taking a more active role in their healthcare, we want to make safety information available about the medicines they are using. We believe that patients, their healthcare professionals, and other consumers will find the information we are providing useful in their prescribing and treatment decisions.

Our Drug Safety Initiative has the following components:

• Drug safety information located together in a new web location.
• Drug specific information for healthcare professionals, patients, and other consumers.
• Other consumer education.
• Draft Guidance: FDA’s “Drug Watch” for Emerging Drug Safety Information.
• Questions and Answers on FDA’s New Drug Safety Initiative.


34 The Pharmaceutical Research and Manufacturers of America (PhRMA) adopted the following position when the program was announced:

The PhRMA Principles on Conduct of Clinical Trials and Communication of Clinical Trial Results … express the commitment of PhRMA member companies to communicate the results of clinical studies (clinical trials), both positive and negative:

continued
FDA’s initiative resulted in controversy, however, when the agency appointed eleven senior managers of its Center for Drug Evaluation and Research (CDER) to the DSOB, which had been established to make the safety review process more independent of CDER’s drug review process. The heavy representation of CDER members on the DSOB prompted some members of the public to view the DSOB as “severely biased in favor of industry.”

In April 2005, Congress stepped into the clinical trials disclosure debate when two members of the U.S. Senate Finance Committee, Senators Chuck Grassley (R-Iowa) and Christopher Dodd (D-Conn.) proposed the Food and Drug Safety Act. This bipartisan legislation would establish the Center for Postmarket Drug Evaluation and Research

“We commit to timely communication of meaningful results of controlled clinical trials of marketed products or investigational products that are approved for marketing, regardless of outcome.”

While publication of study results in a peer-reviewed medical journal is the preferred method of communication, the Principles recognize that not all studies will merit publication in such a journal and thus provide for alternate methods of communication, such as “abstract submission with a poster or oral presentation at a scientific meeting or making results public by some other means.”

PhRMA believes an appropriately designed electronic database will also fulfill our members’ commitment to communicate meaningful clinical study results. By providing a central, widely accessible repository for clinical trials results and a standardized format for the reporting of such results, a clinical study results database will serve the valuable function of making clinical study results on marketed products more transparent. PhRMA thus supports the establishment of a focused database.


35 See supra note 31.


Requires the Director of the Center to conduct activities to ensure the safety and effectiveness of FDA-approved drugs and licensed biological products, including by: (1) conducting postmarket risk assessment and surveillance of such drugs and products; (2) determining whether a postmarket study is required; (3) contracting, or requiring the sponsor of such a drug or product to contract, with the holders of domestic and international surveillance databases to conduct epidemiologic and other observational studies; (4) determining whether a drug or product may present an unreasonable risk to the health of patients or the general public; (5) taking corrective action if such an unreasonable risk may exist; and (6) making information about the safety and effectiveness of such drugs and biological products available to the public and health care providers in a timely manner.

Requires the Drug Safety and Risk Management Drug Advisory Committee to make recommendations to the Director on postmarket studies, drugs and biological products that may present an unreasonable risk, and appropriate corrective actions.

Allows the Secretary of Health and Human Services to assess civil penalties for violations of this Act.

Allows the Director to withdraw or suspend approval of a drug or license for a biological product using expedited procedures under certain circumstances.

Transfers to the Center the functions and duties of the Office of Drug Safety.
(CPDER), which, among other things, would have the authority to require pharmaceutical companies to conduct postmarket trials of new medication and would be able to impose fines of up to two million dollars for noncompliance. Additionally, the CPDER would post clinical study information for fast-track drugs (i.e., those approved on an accelerated basis) and products for pediatric populations, on both the Federal Register and the Internet. Required information would include the study’s nature, its primary and secondary outcomes, and its completion deadline. Again, the proposed legislation would direct such regulation almost exclusively at drug manufacturers.

Pharmaceutical companies such as Eli Lilly and Company are committed to greater transparency for both privately- and publicly-funded research. While others in the pharmaceutical industry still debate disclosure requirements, Lilly has implemented a new disclosure policy that defines its ethical stance on the communication of clinical studies. Under its policy, Lilly goes far beyond what FDA currently requires by making its clinical and postmarket trial results available to the public on its website and on an independent public registry. The information includes the eligibility criteria of its subjects, trial description in lay terminology, and the trial purpose on Phase II, III, and IV trials. Lilly also discloses the results of Phase I, II, and III clinical trials, regardless of their outcomes, no later than when a drug is available commercially to patients. A number of other pharmaceutical companies have implemented similar disclosure policies, including GSK, which actually developed its clinical trial registry before Lilly.

Controversy and debate set aside, the common call from the public, prescription product industry, healthcare providers, regulators, and legislators is for disclosure of data generated by investigators about the benefits and risks of a prescription product.

III. TRANSPARENCY FOR MANUFACTURERS AS A MODEL FOR TRANSPARENCY FOR ALL RESEARCH

While AMA’s proposal recognizes the importance of reporting the results of all clinical trials regardless of the sponsor, the proposal falls short if its motivation is to ensure that all information about prescription medicines is made available to the public. If the goal is to achieve the disclosure of all studies about all medicines to the healthcare professional and the patient, AMA’s proposal should include all studies whatever their origin, regardless of sponsorship. As novelist and physicist C.P. Snow wrote, “‘if [science is] dwindled away into little secret groups hoarding their results away from each other, it would become no better than a set of recipes, and within a generation would have lost all its ideals and half its efficiency.’” Online transparency of all results, clinical and postmarket, regardless of the source, achieves the goal of not only identify-
ing all information about the safety and efficacy of a prescription medicine, but also would have the additional benefit of preventing unnecessary and costly duplication of research. Complete disclosure of all studies also would meet subjects’ expectations that their participation in research furthers medical knowledge.46 Finally, publicly-available, Internet-based biomedical postmarket studies would allow the public, healthcare providers, and the scientific community to identify any inadequacies in studies or the conclusions drawn, whether in the examining room or in the courtroom.

A. Independent Research and Junk Science

Postmarket research conducted by independent researchers often results in what has been termed “junk science.”47 This form of inquiry generated either for the sole purpose of creating or hosting product liability litigation or in the academic’s haste to publish, often results in bad science and even worse conclusions.48 Researchers who publish postmarket studies are not required, as are prescription product manufacturers, to fully disclose the substance and bases for their investigations and conclusions. In contrast to these unregulated studies, a pharmaceutical company’s clinical trial results undergo intense scrutiny under FDA’s IND and NDA application processes, as well as under the continuing MedWatch, and now DrugWatch, obligations. Postmarketing studies of prescription medicines conducted by parties other than the product manufacturer, whatever their purpose and whatever their goal, are scrutinized, at best, through the peer-review process of few publications.49 Before the Journal of the American

46 Dorfman & Reig, supra note 3, at 599.
47 Peter Huber, Galileo’s Revenge: Junk Science in the Courtroom (1991) (popularizing the concept of “junk science”) (“The art of junk science is to brush away just enough detail to reach desired conclusions, while preserving enough to maintain an aura of authoritative science.”).
49 There are several well-known examples of junk science in the courtroom.

Many scientists in the United States may not have noticed, but there is a war on about the role of their subject in the law. Scientists are often called on to serve as expert witnesses in cases ranging in scope from product liability to tort actions brought against manufacturers or polluters. Some environmentalists and members of the plaintiff’s bar believe that the deck has become stacked to favor defendants, because trial judges more frequently find reasons for disallowing than allowing the presentation of expert scientific testimony to juries. Taking the other side are advocates for tort reform, who are critical of the economic impact of outsized jury awards and often refer to the scientific studies offered by plaintiffs to convince those juries as “junk science.”

Well, there certainly are some examples of the latter. The cases involving the prescription drug Bendectin, which led to a well-known 1993 Supreme Court decision that gave federal trial judges criteria for evaluating expert testimony (Daubert v. Merrell Dow Pharmaceuticals, Inc.), attracted some bad studies. So, famously, did the breast implant cases. On the other hand, plaintiffs have sometimes produced careful and responsible testimony that has been essential in resolving serious challenges to environmental quality and public health. Each side in this fight, in other words, has some weapons to turn on the other, and that guarantees it a long run.

Medical Association (JAMA) called for transparency in clinical trials it found that peer review did not always ensure scientific validity in investigations.50

Because the scientific community often cannot verify the data in support of a published paper and because of the lack of any clear guidelines as to what ought to be contained in articles generated by independent researchers, such papers are susceptible to the finding that there is no scientific merit to the study or to its conclusions.51 Peter Huber characterizes this bad science as “[j]unk science [–] the mirror image of real science, with much of the same form but none of the same substance.”52

The publication of scientifically-unfounded data or conclusions often results in medical decisions for which there are no bases and quite often have a harmful impact on the practice of medicine. For example, the U.S. Chamber of Commerce together with HarrisInteractive Market Research53 surveyed doctors, pharmacists, and patients about the effect that litigation involving a medicine had on the prescription and use of that drug. The survey found:

One in four patients surveyed said they would immediately stop taking a drug prescribed for them if they saw an advertisement for a lawsuit over the medication . . . .

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50 A decade ago, JAMA obtained responses from 12 of the then-published peer-reviewed journals in the United States. It found several short-falls in the process:

Twelve editors responded to the survey. Ten reported having statisticians among their editors, while only two had health economists and none had ethicists. Clinicians in the specialty field were almost always the primary reviewers of submissions, while methodologists (statisticians, health economists, or ethicists) were involved less frequently. Journals reported little knowledge of the training of their reviewers in these fields. While nine journals requested disclosure of the financial relationship between author and sponsor, only one inquired whether the sponsor’s written approval was required prior to manuscript submission, and only one knew whether there was an independent steering committee for the study.


51 In 2002, Dr. Richard Horton, Editor of Lancet, published “The Hidden Research Paper,” which discussed whether there is full disclosure of all views in published medical papers. He found:

Results: A total of 36 (67%) of 54 contributors replied to this survey. Important weaknesses were often admitted on direct questioning but were not included in the published article. Contributors frequently disagreed about the importance of their findings, implications, and directions for future research. I could find no effort to study systematically past evidence relating to the investigators’ own findings in either survey responses or the published article. Overall, the diversity of contributor opinion was commonly excluded from the published report. I found that discussion sections were haphazardly organized and did not deal systematically with important questions about the study.

Conclusions: A research paper rarely represents the opinions of those scientists whose work it reports. The findings described herein reveal evidence of (self-) censored criticism, obscured meanings, confused assessment of implications, and failures to indicate directions for future research. There is now empirical support for the introduction of structured discussion sections in research papers. Editors might also explore ways to recover the plurality of contributors’ opinions.

287 JAMA 2749 (2002).

52 HUBER, supra note 47, at Introduction.

53 For more information about Harris Interactive Inc., see http://www.harrisinteractive.com/ (last visited Dec. 1, 2005).
Nearly half of the pharmacists surveyed said their patients either stopped taking a properly prescribed medication (44 percent) or refused to take a medication (40 percent), because the patient discovered the drug might be the focus of a liability lawsuit. For doctors, 38 percent reported patients stopped taking and 29 percent said patients refused to take a prescribed drug because the patients found out that the medication was part of a lawsuit.

More than 40 percent of the doctors surveyed said they avoided prescribing an appropriate medication because the drug might have been involved in a product liability lawsuit. More than half (57 percent) are concerned they could face patient lawsuits over side effects from a properly prescribed drug.54

In some instances, studies were created solely for the purpose of generating or supporting litigation with an immediate negative impact on the prescribing practices of healthcare providers.55 The result of this circular endeavor ultimately was to bankrupt corporations, drive up insurance costs, and increase the cost of medicines.56 If these very real impacts are to be minimized, all postmarket studies must be fully transparent.

1. Weeding Out Biases

Just as a pharmaceutical company’s commercial interest in a study has the potential to lead to biased results, without FDA oversight the self-interest of independent researchers also may lead to scientifically-unfounded conclusions when analyzing a drug, postapproval. For example, plaintiffs’ attorneys are increasingly funding the “scientific” research that is used in their litigation. Researchers who receive funding from these firms may feel compelled to deliver the “right” answer, even if that answer means manipulating procedures, distorting data, and reporting results selectively.

The facts of Ruffin v. Shaw Industries57 illustrate one example where purported scientific findings were published with the sole goal of supporting litigation. In Ruffin, the

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56 See HUBER, supra note 47.

57 149 F.3d 294.
plaintiffs’ attorneys hired physiologist Rosalind C. Anderson, Ph.D., to study the effect of carpet emissions and their potential to cause toxic injury. Dr. Anderson concluded that the carpet emissions did cause harm to the plaintiffs. The U.S. Environmental Protection Agency (EPA), several University of Pittsburgh researchers, and two carpet manufacturers tried to replicate Dr. Anderson’s study; none were able to achieve the same toxic effect result. Under the *Daubert* criteria for admissibility of scientific evidence, the court struck the testing by Dr. Anderson:

[T]he only evidence that Dr. Anderson’s findings have been replicated under the same conditions as used in evaluating plaintiffs’ carpet sample was the EPA and Dr. Alarie’s use of Dr. Anderson’s own apparatus on two occasions. No organization, public, or private, has been able to independently obtain consistent findings using the techniques employed by Anderson Labs with their own equipment. Thus, plaintiffs have presented no evidence that the Anderson test methodology has been independently replicated, as that term is used in the scientific community… .

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58 See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). In attempting to delineate the inquiry required by Federal Rule of Evidence 702 to determine the admissibility of expert scientific testimony, the Supreme Court provided the following set of nonexclusive factors to be considered in evaluating whether the offered science is reliable.

1. **Testing.** Whether the expert’s theory can be, and has been, tested.
2. **General Acceptance.** Whether the theory, technique, or methodology is generally accepted within the relevant scientific community.
3. **Peer Review.** Whether the theory or technique has been subjected to peer review and publication.
4. **Rate of Error.** Whether the technique or methodology has an acceptable known or potential rate of error.
5. **Standards.** Whether the operation of particular technique is controlled by adequate standards.

*Id.* at 593-94. The Court noted that these factors, along with others the trial court considers relevant, should be weighed to determine the evidence’s admissibility, but stressed that no one factor should be dispositive. *Id.* at 595. Thus, the primary significance of the Supreme Court’s decision in *Daubert* was to make the “general acceptance” standard merely one factor in a multifactor analysis, not the determinative test for admitting scientific evidence. *Ruffin*, 149 F.3d at 296 (referencing *Daubert*, 509 U.S. 579).

Federal courts interpreting *Daubert* have applied additional “prong” factors regarding reliability:

1. **Recognition of Methodology in Specialized Scientific Literature:** Absent publication of his or her own methodology, can the expert cite specialized scientific literature, which endorses use of the methodology? See *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1211, 1315 (9th Cir. 1994), on remand from 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469 (1993); *United States v. Downing*, 753 F.2d 1224, 1238-39 (3d Cir. 1985); *Wade-Greaux v. Whitehall Labs.*, 874 F. Supp. 1441, 1478 (D.V.I. 1994), aff’d, 46 F.3d 1120 (3d Cir. 1994); *DeLucca v. Merrell Dow Pharm., Inc.*, 791 F. Supp. 1042, 1056 (D.N.J. 1993), aff’d, 6 F.3d 778 (3d Cir. 1993).

2. **Non-Judicial Use of Methodology:** Has the expert used the methodology outside the courtroom? Does the expert use the same methodology in a peer-reviewed scientific context as in litigation? See *Wehling*, 162 F.3d 1158 (1998); *Lust v. Merrell Dow Pharm., Inc.*, 89 F.3d 594, 597 (9th Cir. 1996); *Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) (*Daubert II*); *Reynard v. NEC Corp.*, 887 F. Supp. 1500, 1507 (N.D. Fla. 1995); *Washington v. Vogel*, 880 F. Supp. 1545, 1548 (M.D. Fla. 1995).
[T]he uncontradicted evidence before the court demonstrates that peers in the relevant scientific community have been critical of the methodology employed by Anderson Labs but generally supportive of the procedures employed by EPA and private laboratories cited by defendants, which failed to independently replicate Dr. Anderson’s findings. …

The evidence relating to the testing of the Anderson methodology and the accompanying peer review indicate that this technique is not generally accepted in the relevant scientific community. Moreover, defendants submitted affidavits of other toxicologists, which explicitly state that the Anderson test methodology has not been generally accepted by the toxicological community as reliable.59

Another example of litigation-generated science can be found in Valentine v. Pioneer Chlor Alkali Co.60 In Valentine, the plaintiff’s expert designed an epidemiological study that evaluated the effect of escaped chlorine gas in order to determine whether it caused neurological damage. All of the exposed subjects who participated in the study were plaintiffs involved in the litigation. The court excluded the testimony of five of the proffered experts on the grounds that their testimony was “novel” and “unsupported by research extraneous to the litigation.” Although one study had been published in a peer-reviewed journal, the court noted the difference between “editorial” peer review and “true peer review” and concluded that the author’s study contained “very serious flaws.”61

Both of these decisions are based on the ruling in Daubert v. Merrell Dow Pharmaceuticals, Inc.—the leading case on litigation-generated science.62 In Daubert, plaintiffs alleged Bendectin, a morning sickness drug widely administered to pregnant women from 1956 to 1983, caused birth defects. No published study existed prior to the litigation finding that Bendectin was capable of causing malformations in fetuses. Plaintiffs’ attorneys retained eight experts, however who testified that their unpublished studies, and re-analysis of published studies, linked Bendectin to fetal malformation. The Supreme Court ultimately rejected the claims made by plaintiffs’ experts and granted Merrell Dow summary judgment. The Court required a scientific foundation to any study presented to a court or to a jury to prove that a prescription medicine was the cause of harm to the patient. The primary locus of this obligation is Federal Rule of Evidence 702, which sets the standard for admitting expert scientific testimony in a federal trial and which clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify.

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue “an expert” “may testify thereto.” The subject of an expert’s testimony must be “scientific … knowledge.” The adjective “scientific” implies grounding in the methods and procedures of science. Similarly, the word “knowledge” connotes more than subjective belief or unsupported speculation. The term “applies to any body of known facts or any body of ideas inferred from such facts or accepted as truths on good grounds.”63

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59 Ruffin, 149 F.3d at 299.
61 Valentine, 921 F. Supp. at 678.
63 WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1252 (1986) (emphasis added).
Despite the Supreme Court holding, hundreds of Bendectin lawsuits continued to be filed. As one commentator observed, “the Bendectin cases go on, in spite of what appears to be better evidence for safety than is available for any other substance, including tap water.” Although Merrell Dow won these cases seventy percent of the time, the company’s litigation expenses, eighteen million dollars per year, were fast approaching the drug’s profits. Eventually, it forced Merrell Dow to stop making the drug in 1982.

Other pressures also may affect the scientific accuracy of independent research. For example, the academic community expects that professors and graduate students will conduct research and publish the results; the refrain “publish or perish” is well known to all academics. This pressure to publish directly affects the accuracy of postmarket medical research.

The Yale University School of Medicine’s Hemorrhagic Stroke Project, published in the December 2000 issue of the New England Journal of Medicine (NEJM), exemplifies why clinical trials transparency should exist. The Nonprescription Drug Manufacturers Association and several drug manufacturers conceived the five-year study, which concluded that phenylpropanolamine (PPA), a commonly used ingredient in cold and cough products and appetite suppressants, was linked to a slightly increased risk of stroke in women. The Yale study compared 702 male and female stroke patients with 1,376 healthy men and women. Among other conclusions, the study reported that female stroke victims were sixteen times more likely than healthy females to use PPA-containing appetite suppressants, and twice as likely as healthy women to use cold and cough products containing PPA. By November 2000, based on the study’s results but...
prior to its publication, FDA ordered a withdrawal of PPA and PPA-containing products.74 Two months later, in February 2001, the first lawsuits were filed against PPA manufacturers.

FDA’s website contains a page dedicated to the chronology of the discussion about the study.75 A second page contains twenty-nine links evaluating the claimed flaws in the study.76

Defendants claimed that the study was flawed in several ways:

Those flaws include fragile data, improper use of random digit dialing, low participation by eligible controls, chance, temporal precedence bias, misclassification bias, selection bias, inadequate adjustment for confounding, the combination of [two types of strokes] and various protocol violations and errors.77

The discovery stage in the litigation revealed what the defendants perceived as questionable methodology underlying the study’s statistical analysis.78 Information obtained by the defendants confirmed that the study failed to clearly disclose that the stated statistics regarding appetite suppressants were based on only six stroke victims: four were smokers, some had high blood pressure, and some of the smokers also had high blood pressure.79 Fifty-seven percent of the female stroke victims in the study were either smokers, had high blood pressure, or were smokers with high blood pressure.80 Moreover, the Yale researchers inflated the percentage of people who had taken a product containing PPA and who subsequently had a type Ischemic stroke, caused by

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77 Id. at n.6.

78 Yale resisted subpoenas for its patient data on the grounds that the information was confidential and would have a chilling effect on research. In Re: Phenylpropanolamin (PPA) Products Liability Litigation, MDL No. 1407, Order Re: Motion to Quash Subpoenas re Yale Study’s Hospital Records (Aug. 19, 2002).

79 Steven Milloy, Is FDA’s PPA Scare BS?, FOX NEWS (Nov. 10, 2000).

80 Id.
an arterial blockage, which is not linked to PPA. The Yale researchers included the Ischemic stroke patients in their analysis of the relationship between PPA and hemorrhagic strokes. FDA had concluded the study was “well designed and executed.”

These problems with the study’s statistical analysis prompted Dr. Thomas Brott, a Mayo Clinic reviewer of the Yale Hemorrhagic Stroke Project, to state that he would “reject the paper for [the New England Journal of Medicine] . . . . For me it reflects need-to-publish-p-values.”

Judge Anthony Mohr, after reviewing the study in detail, also noted, “I mean, you could almost say that there was some unethical activity with that Yale Study . . . . I am very, very concerned at the integrity of those researchers.” On the other hand, Judge Barbara Jacobs Rothstein, the jurist coordinating the MDL proceedings in the PPA litigation, found the study admissible under Daubert principles and acknowledged that “[s]cientific studies almost invariably contain flaws ... any flaws that might exist go to the weight afforded the [study], not its admissibility.”

81 See Smith & Martin, supra note 69, at 35 (quoting Dr. Thomas Brott as stating, “the level of detail for other aspects of the paper is out of portion to the superficial mention of the distinction [between two different stroke populations combined for the purpose of the study]”).

82 See Kernan et al., supra note 70. On May 24, 2000, the Consumer Health Products Association (CHPA) Phenylpropanolamine Working Group submitted a 22-page letter to FDA detailing problems with the study. It pointed out 11 areas that, CHPA suggested, failed to support a causal relation between PPA use and a hemorrhagic stroke. It noted:

[T]he large differential in participation rates between cases and controls could affect the findings and is not adequately explained in the report. Likewise, inadequate data are provided to allow independent verification of the findings or to verify that sensitivity analyses do not alter the confidence limits or [probability values, “p values”] for the findings.


Implications of FDA and Industry reactions to the study findings:
1. Careful review of methods and results will be necessary before findings can be used as the basis for regulatory policy. FDA should seek all data (not only manuscript) as part of their review.
2. Rapid communication of findings and resulting publicity may force FDA to react prior to thorough review. As such, posting on FDA website may be damaging.
3. FDA restraint and careful review will minimize consumer fear and industry needs to reformulate their products.

Id. at 11.


84 See Smith & Martin, supra note 69, at 35 (quoting Dr. Thomas Brott. “[P]-value publication” means that there is great likelihood the Yale study’s findings are not statistically significant because they were based on chance.”); see also Valerie J. Easton & John H. Coll, P Value, Statistics Glossary, at http://www.stats.gla.ac.uk/steps/glossary/hypothesis_testing.html#pvalue (last visited Dec. 1, 2005) (defining p-value as the probability of getting a value of the test statistic as extreme as or more extreme than that observed by chance alone).

85 Smith & Martin, supra note 69, at 36 (citing Lutz v. Novartis, Rep. Tr. of Proceedings at 46 (Mar. 18, 2005)).

86 Id. Order Granting in Part and Denying in Part MDL Defendants’ Motion to Preclude Plaintiffs’ Expert Opinions as to General Causation Pursuant to Fed. R. Evid. 702 and 703 and Daubert I.
Had Yale provided full transparency of its study and methods at the time of publication, the research would have been publicly available for evaluation and subsequent judgment as to whether it was good science.

Scientifically-unfounded studies, whether generated by plaintiffs’ attorneys or pre- eminent institutions, impact not only prescription product manufacturers but also, ultimately, patients. As Dick Thornburgh explains in *Junk Science—The Lawyer’s Ethical Responsibilities*, “The ultimate victims [of junk science] are America’s workers and consumers through the increased costs, diminished innovation opportunities, and foregone product availabilities imposed on enterprises engaged in scientific research and development and product manufacturing.”

2. The Human Toll

Bad science subjects the public to unnecessary, costly, and potentially risky medical treatment. In the early 1990s, tort lawyers—armed with what turned out to be bad science—claimed that women with silicone breast implants had a higher likelihood of contracting diseases such as scleroderma, rheumatoid arthritis, and lupus. By 1993, Dow Corning Corp., the leading manufacturer of breast implants had been named in more than 3,500 lawsuits. Dow, along with several other manufacturers, proposed settling the litigation for $4.75 billion, including $1 billion in attorneys’ fees. The terms of the settlement would have allowed a woman with silicone breast implants to collect $700,000 for symptoms such as muscle ache, disturbed sleep, and chest pain. After more than the expected numbers of patients were recruited, however, the plaintiffs’ attorneys asserted that the near $5 billion settlement was too low. In the end, silicone-gel breast implant manufacturers paid approximately $7 billion to settle the claims against them.

The Mayo Clinic, AMA, the *NEJM*, FDA advisory panels, Harvard University, John Hopkins University, and the University of Michigan eventually all concluded that the science relied on by the plaintiffs’ attorneys and their experts was scientifically flawed and invalid. In April 2005, FDA’s General and Plastic Surgery Devices Panel ultimately concluded that silicone gel-filled breast implants were “approvable with conditions.”

There were negative effects on the patients, but they were found to be unrelated to the presence of silicone breast implants. Mayo Clinical Scientist Marcia Angell reported that at the height of the negative media attention during the breast implant litigation, doctors force-fed patients steroids and even put one woman through hospitalization and therapy at a cost of $10,000 per month for a total of $90,000. Hundreds of frightened women had their silicone breast implants removed unnecessarily and often replaced with saline.

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89 Id.

90 The process and conclusions are summarized in Barbara S. Hulka et al., *Experience of a Scientific Panel Formed to Advise the Federal Judiciary on Silicone Breast Implants*, 342 N. Eng. J. Med. 812-15 (2000); see also In Re: Phenylpropanolamine (PPA) Products Liability Litigation, MDL No. 1407 (June 18, 2003).


92 See Olson, supra note 88.
Before 1992, there was no record of any patient reporting anxiety as the reason for having her implants removed. By 1995, after attorney-sponsored hotlines (e.g., 1-800-RUPTURE) were set up, nine percent of women identified silicone anxiety as the primary reason for undergoing secondary breast implantation surgery, compared with only eight percent who cited pain. The number of women who suspected that their implant had ruptured rose from three percent to twenty-one percent. Pain aside, women also faced unnecessary surgical risks (e.g., possible complications of general anesthesia, nausea, vomiting and fever, infection, hematoma, hemorrhage (abnormal bleeding), thrombosis (abnormal clotting), and skin necrosis) as a result of junk science.

Conversely, many people are willing to abandon medical treatment when plaintiffs’ attorneys advertise an independent postmarket drug study that claims to link the drug to a serious health risk. According to the U.S. Chamber of Commerce, approximately two in five physicians will report that their patients stop taking a properly prescribed drug because of publicity concerning the drug’s potential involvement in litigation. In addition, one quarter of patients report that they would stop taking a drug immediately if they saw an advertisement for a lawsuit over a drug they were taking.

B. Contributing to Scientific Knowledge

Without transparency of postmarketing studies, the continued publication of scientifically-unfounded conclusions in the medical literature will be only one result. Independent researchers conducting postapproval studies often fail to report their results. When research on a postapproval drug or device indicates an inconclusive result or that a treatment is useless, researchers often conclude that these findings are not “publication worthy.” For example, studies in numerous areas of medicine have shown that about fifty percent of the presentations made at scientific meetings never result in published articles—these numbers include clinical studies.

This type of nonreporting creates health risks for patients because data that might have impacted patient care is never disclosed. It also can result in researchers unknowingly repeating research already proven to be unsuccessful. Samuel Blackman, M.D., Ph.D., an AMA CSA member, has advocated for clinical registries, stating, “In addition to reducing publication bias … registry will allow physician researchers to know what research questions have already been asked and potentially will allow researchers to refine their research questions and improve study design.”

Additionally, many patients who agree to participate as research subjects, whether in a clinical trial or other study, do so with the hope that they might benefit from the...
therapy but also trusting that their participation will contribute to the betterment of medical knowledge. Studies show that one of the main reasons why people agree to participate in medical research is to help future patients in similar situations.\textsuperscript{103} If the scientific knowledge gained from a study is never published, then the subject’s contribution goes unrealized.\textsuperscript{104} As Professor of Medical Ethics Howard Mann reasons, “participants, whose enrollment made the research possible, are therefore entitled to know the results of the research and the associated implications for their health.”\textsuperscript{105}

IV. RECOGNIZING THE NEED FOR TRANSPARENCY IN INDEPENDENT RESEARCH

A number of organizations have begun to recognize the significant influence that all postmarket research has on healthcare and are embracing a more expansive view of transparency through online registries. The International Committee of Medical Journal Editors (ICMJE), a group representing such journals as \textit{JAMA}, and \textit{NEJM}, announced in September 2004 that all of its member journals would adopt a trial-registration policy. ICMJE journals will not publish the results of biomedical clinical trials that have not been registered in advance in an independent, publicly-scrutinized database. ICMJE requires a registry to meet criteria similar to that proposed by AMA for a national registry. ICMJE defines biomedical clinical trials broadly, however (i.e., “any research projects that prospectively assign human subjects to interventions or comparison groups to study the cause-and-effect relationship between a medical intervention and health outcome”).\textsuperscript{106} In other words, postmarket research, such as epidemiological studies, would be subject to ICMJE’s trial-registration policy.

ICMJE’s position has far-reaching implications because of the prominence of its member journals in the medical community. Researchers funded by plaintiffs’ firms know that peer-reviewed publication is an important factor if their work is to pass a court’s \textit{Daubert} review, and academics value the legitimacy and prestige that is associated with publication in top medical journals.\textsuperscript{107} While ICMJE’s membership currently consists of only eleven journals, other biomedical journals typically take their lead from these few.\textsuperscript{108}

The National Institutes of Health (NIH) requests that researchers receiving NIH funding share all study results with the agency and circulate the results six months after publication.\textsuperscript{109} NIH notes that its policy will result in the following public benefits:

- Ensuring access to the full text of NIH-funded research publications will improve the public’s understanding and appreciation of biomedical research findings.

- Enhanced access to information strengthens and expands the impact of research while disseminating results in a timelier manner. The online archive will increase the

\textsuperscript{103} See Dickersin & Rennie, supra note 100.

\textsuperscript{104} Id.

\textsuperscript{105} Howard Mann, \textit{Research Ethic Committee and Public Dissemination of Clinical Trial Results}, 360 \textit{Lancet} 406 (2002).


\textsuperscript{107} See \textit{The Sounds of Silence: Clinical Trials}, supra note 99.

\textsuperscript{108} Id.

The policies currently followed by the ICMJE and pharmaceutical companies such as Eli Lilly and those proposed by NIH, illustrate the scientific community’s recognition of the importance of consumer access to—not just quantity, but also quality—medical information. As Americans increasingly go online to learn about a drug, the importance of correct and transparent information from all researchers whose studies comment on a drug’s safety and effectiveness cannot be ignored.

V. INSTITUTIONAL REVIEW BOARDS, ACADEMIC FREEDOM, AND HIGHER JUSTICE

As is the case with prescription product manufacturers, it is feasible for the government to legally compel all independent researchers to register their postmarket studies online. Under the FDA Modernization Act of 1997 (FDAMA), researchers investigating drugs for “serious or life-threatening diseases and conditions” must post their trials on a government registry.111 FDAMA expressly applies not only to pharmaceutical companies, but also to private entities, academic institutions, and government agencies that sponsor a clinical trial.112

Additionally, many courts recognize independent scientific research as only having minimal, if any, privilege from compelled disclosure. In Deitchman v. E.R. Squibb & Son,113 the court assumed, arguendo, that scientific research enjoys a qualified privilege but nevertheless compelled a scientist to turn over clinical research based on a subpoena. In Deitchman, a defendant in a DES case sought a subpoena for data on Dr. Herbst’s Registry of Hormonal Transplacental Carcinogenesis. Dr. Herbst was not a party to the case nor had he been called as an expert.114 His connection to the case was based on a study he had conducted on clear cell adenocarcinoma of the vagina. In 1971, Dr. Herbst had published an article in the *NEJM* suggesting a link between prenatal exposure to DES and the development of clear cell adenocarcinoma.115 After publication, in 1972, Dr. Herbst set up a registry compiling information from over 500 case files on the disease.116 The defendant sought the information pursuant to a subpoena based on the belief that the information on the registry formed the basis of the plaintiffs’ experts’ conclusions.117

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111 Dorfman & Reig, supra note 3, at 600-01.


114 Deitchman, 740 F.2d at 556.

115 Id.

116 Id. at 558.

117 Id.
Although Dr. Herbst had no involvement in the DES litigation, the Seventh Circuit Court of Appeals nevertheless overturned the lower court’s decision quashing defendant’s subpoena. The court dismissed Dr. Herbst’s contention that premature disclosure of research results would adversely affect his standing in the academic community stating that, while research is not to be “prized into unnecessarily”; such privileges … must yield if to enforce them would produce a miscarriage of justice.118

Moreover, when postmarket studies use human subjects, such as the Yale Hemorrhagic Stroke Project, the government has a greater ability to regulate through IRBs. The National Commission for the Protection of Human Subjects of Biomedical and Behavior Research developed basic principles governing research involving human subjects that were published in the Belmont Report.119 One principle highlighted in the Report is beneficence, “maximizing possible benefits and minimizing possible harms to the subject.”120 The current U.S. human subject protection regulations are based on the Belmont Report.121

IRBs review and approve all studies using human subjects and enforce the principles established in the Belmont Report.122 Consequently, when researchers apply to use human subjects, IRBs should require them to stipulate that they will make the results of their study transparent and available to the public online according to the principle of beneficence.123 If a researcher refuses, IRBs should refuse approval of the proposed research. IRBs continually review research while it is under way to ensure the continued safety of the participants.124 As a result, IRBs would be in a position to ensure that researchers are complying with the stipulation requirement. A failure to report results would equate to misconduct on the part of the researcher—a factor IRBs could use when declining to approve a subsequent proposal made by that same researcher.125

VI. CONCLUSION

Postmarketing research plays an important role in educating the public about drug safety and effectiveness. The Internet is a source of medical information for approximately ninety-eight million people in the United States.126 Experts estimate that in the next five years the Internet will be the public’s number one source of information about pharmaceutical products.127 Yet, the public’s increased access to online drug research is helpful only if all drug research is transparent, available, and online for scientific and public scrutiny. Consequently, independent postmarket research should be subject to online transparency requirements.

118 _Id._ at 560.
120 _Id._
121 _See_ Protection of Human Subjects, 45 C.F.R. § 46 (embodying the ethical principles of the Belmont Report).
123 _Id._
124 _Id._
125 Howard Mann made a similar proposal when he argued that researchers should disseminate their clinical trial results. _See_ Mann, _supra_ note 105.
126 U.S. CHAMBER OF COMMERCE STUDY, _supra_ note 97.
127 _Id._