

Book Reviews

The Truth About the Drug Companies
by Marcia Angell, M.D.
Random House, New York, 2004
Hardcover, 266 pages

"Is there some way (drug) companies can rig clinical trials to make their drugs look better than they are? Unfortunately, the answer is yes. Trials can be rigged in a dozen ways, and it happens all the time." Typically, any author making such an uncompromising statement would, just for starters, be denounced for unjustified hostility to pharmaceutical medicine. For the *coup de grâce*, the writer would be dismissed as an unqualified quack.

Not this time. This is the stentorian voice of Dr. Marcia Angell, former Editor-In-Chief of the New England Journal of Medicine in her book, *The Truth About the Drug Companies*. A highly respected and established medical insider (twenty years with NEJM), she does not shrink from employing the alternative health movement's most derogatory epithet, "big pharma," to attack an industry which, she says, "will do almost anything to protect exclusive marketing rights." Dr. Angell fairly rips into her discussion of patent-prolonging, profit-piling, non-innovative "me-too" drugs, which she reveals as the true bread-and-butter of the modern pharmaceutical industry.

As for the few truly new blockbuster drugs, Dr. Angell shows that clinical trials are often rigged. This disgrace goes way beyond mere bias; it is blatant dishonesty. One "way to load the dice," she writes, "is to enrol only young subjects in trials, even if the drugs being tested are meant to be used mainly in older people. Because young people generally experience fewer side effects, drugs will look safer." Another of the "common ways to bias trials is to present only part of the data - the part that makes the product look good - and ignore the rest." She adds, "The most dramatic form

of bias is out-and-out suppression of negative results."

Several dollars per pill is a lot of money, most especially for the uninsured. Incredibly, people without health insurance pay the highest drug prices, says Dr. Angell and those prices are high not because of R&D, but because of S&P (sales and promotion). Pharmaceutical companies, she says, "do whatever they can to obscure the fact that in 2001 consumers paid something like a 30 percent markup for sales promotion." Drug companies' research and development expenses, the most common industry excuse for high prices, are "dwarfed by their vast expenditures for marketing," which amounts to at least \$19 billion annually.

A chapter with the less than subtle title of "The Hard Sell: Lures, Bribes and Kickbacks" describes a pharmaceutical industry that deploys an army of 88,000 energetic sales representatives such that some physicians "may be visited by a dozen in one day." Dr. Angell says that sales reps "often announce their arrival by distributing goodies to everyone. . . as well as the inevitable sack of free samples. Gifts to doctors are often lavish," and she provides plenty of embarrassing examples.

Drug companies see physicians as prescription delivery devices, and they are monitored accordingly. "Prescription-tracking companies buy information from big pharmacy chains about doctors' prescribing habits and sell it to drug companies." Drug reps "know exactly what a doctor prescribes before each visit" and "they can tell whether the visit paid off by seeing what the doctor does afterward."

The pharmaceutical presence is everywhere you find a white coat and a beeper. "Drug reps are allowed to attend medical conferences, may be invited into operating and procedure rooms, and sometimes are even present when physicians examine patients in clinics or at the bedside. Patients are often allowed to assume the reps

are doctors... Drug companies pay doctors several hundred dollars a day to allow sales reps to shadow them as they see patients." It's a way to "build business."

What a business it is. The entire pharmaceutical industry, says Dr. Angell, is "primarily a marketing machine to sell drugs of dubious benefit." Big pharma, she says, is "taking us for a ride." And it is no mere jaunt around the park. Drug industry worldwide sales are approaching \$500 billion per year, half of which are in North America. Profit margins are typically 20 per cent, so high that "the combined profits for the ten drug companies in the Fortune 500 were more than the profits for all the other 490 businesses put together."

One way the companies try to justify their enormous profits, Dr. Angell says, is that they use "a kind of blackmail: if you want drug companies to keep turning out life-saving drugs, you will gratefully pay whatever they charge." And they charge plenty. "When it came on the market, Taxol sold for \$10,000 to \$20,000 for a year's treatment...Novartis priced Gleevec at about \$27,000 for a year's supply...Genzyme charges patients on the order of \$200,000 to \$300,000 for a year's supply" of Cerezyme, for which "research and early development was done entirely by NIH-funded scientists." Taxol, as well as Epogen, Procrit, and Neupogen "were developed largely with public funding."

The author devotes considerable attention to, and succeeds in clarifying what is, at best, a complex topic: taxpayer-funded scientific research does not belong to the taxpayers. The results can be, and are, snatched up and patented by pharmaceutical corporations. And since the 1980s, it's not only legal, it's positively encouraged.

You will rarely hear academia complain. Why? Because they are aboard the gravy train. Dr. Angell writes: "Columbia University, which patented the technology used in the manufacture of Epogen and Cerezyme, collected nearly \$300 million in

royalties" in 17 years. "The patent was based on NIH-funded research." Harvard is in just as deep. In its own Faustian dealings with the drug companies, "a Harvard hospital has a deal that gives Novartis rights to discoveries that lead to new cancer drugs... Merck is building a twelve-story research facility next door to Harvard Medical School... In Harvard Medical School's Dean's Report for 2003-4, the list of benefactors included about a dozen of the largest drug companies."

The result? "Bias is now rampant in drug trials...(Pharmaceutical) industry-sponsored research was nearly four times as likely to be favourable to the company's product as NIH-sponsored research." "NIH-sponsored" means taxpayer funded, and then, when they need to use a drug, those same taxpayers pay again, and way too much, for the drug they already paid out grant money to develop. What a sweet system for the pharmaceutical cartel.

Twin chapters, "Marketing Masquerading as Education" and "Marketing Masquerading as Research," reveal that drug companies pay nearly two-thirds of the costs of continuing medical education. This, and other even more dubious practices, makes doctors into "company shells," says the author. "By calling it education... but not marketing, companies needn't worry about anti-kickback laws." While the pharmaceutical industry's reach into education is bad enough, its grip on research is scandalous. For example: Drug company "publications strategies" have them "sponsor minimal research, prepare journal articles based on it, and pay academic researchers to put their names on those articles." It is so bad that Dr. Angell wrote an editorial in NEJM¹ entitled "Is Academic Medicine for Sale?" A reader wryly responded, "No. The current owner is very happy with it."

Overall, this is one grim subject. Fortunately, there is ample charm in Dr. Angell's writing style. Though she will

bludgeon you with buckets of incriminating information, you will enjoy the process. Clearly, Dr. Angell was well-placed as Editor-In-Chief of NEJM. Her writing is crisp and clear, efficiently organized, tightly referenced, and still a surprisingly good read for the layman. Her discussion of the marketing of erectile dysfunction drugs constitutes an engaging example:

“Here the expectation is that you will ask your doctor to prescribe the drugs for you. For instance, GlaxoSmithKline and its co-marketer Bayer signed a deal with the National Football League to promote their me-too drug Levitra to compete with Viagra for the huge “erectile dysfunction” market. Reportedly the deal cost the companies \$20 million. In addition to exclusive league sponsorship, they made individual deals with some of the teams. The agreement with the New England Patriots, for instance, called for Levitra’s burning flame logo to appear on signs ringing Gillette Stadium. Mike Ditka, former coach of the Chicago Bears, would make a thirty-second pitch on a large screen. In fact, to watch the 2004 Super Bowl was to wonder whether football causes erectile dysfunction.”

In the “Get Our Money’s Worth” chapter, Dr. Angell presents her prescription for the government to fix what presently amounts to a pharmaceutical financial free-for-all. Until that very cold day in Hades may arrive, her closing presentation is doubly important. In the Afterword, Dr. Angell provides a list of cautionary, highly specific questions that all patients should ask their doctors whenever they are issued a prescription. These will likely be the most photocopied pages of a totally remarkable book.

It is especially satisfying to find a distinguished physician-author letting loose well-deserved, point-blank salvoes straight into the bulwarks of the pharmaceutical industry. Reading *The Truth About the Drug Companies* will leave some readers with the

realization that the truth is just as bad as they feared. It will leave the rest of us with the realization that it is far, far worse.

References

1. Angell M: Is academic medicine for sale? *N Engl J Med*. 2000; May 18/342(20): 1516-8.

—Review by Andrew W. Saul

Ascorbate: The Science of Vitamin C
Steve Hickey, Ph.D., and Hilary Roberts, Ph.D.
Lulu Publishers, Ltd. 2004.
Paperback, 268 pages

As the title suggests, this book addresses the topic of Vitamin C in a scientific light. In other words, the authors (one a Ph.D in Biophysics, the other a Ph.D. in Early Life Malnutrition) takes the principles of research investigation and analysis that are associated with scientific disciplines, and they apply these methods toward their own objective of understanding vitamin C.

The authors main intention in writing this book seems not so much to draw scientific conclusions themselves, but rather to provide the reader with enough information with which to arrive at his/her own conclusions -scientifically, rationally, and independently of any bias.

Tracing the history of this misunderstood nutrient throughout the centuries and into modern times, Hickey and Roberts point out that the benefits of vitamin C were known even before James Lind’s work in the 1700s. For example, the idea that citrus fruit could prevent and cure scurvy was noted in medical literature as early as 1611, and even prior to that in the nonmedical literature in 1227. Now, a mere eight centuries later, perhaps we should all consider revising the popular saying, that it takes “two generations” for a paradigm shift to occur.

This book is meant to inform and empower the layperson, and therefore it is written in terms that the non-medically and

non-scientifically trained can understand. This does not however, mean that important scientific points are glossed over or excluded. To the contrary, the authors devoted an impressive amount of time to explaining the basic fundamentals of science with entire sections entitled, "The Scientific Method," "The Scientific Reliability," and "Scientific Saleability." A chapter entitled, "Social Influences on Science" should also be quite an eye opener to the average lay reader in putting together all the pieces of the puzzle that will eventually form the full picture of Vitamin C.

Only within its full historical, social, political, cultural, and economic context can anything be fully understood, and this is especially true of vitamin C. Although it is not until page 51, Chapter 5, that the authors begin a direct discussion of vitamin C itself, the reader should by this time have gained a solid and important foundation upon which to build a stable understanding of the more technical and detailed material that is to follow. The book ends with a chapter on "Replication and Refutation," followed by a glossary, an index and 575 references (several of which do not correspond correctly with their appointed places in the text, but the authors have invited correction of such errors, so no doubt subsequent editions of this book shall be without these minor flaws.)

This particular reviewer not only recommends this book most highly, but feels a strong sense of urgency about getting its message "out into the world"- No doubt heightening this sense of urgency is a mention on the final page of the final chapter of the following impending doom and gloom:

There is an international plan called the *Codex Alimentarius*, to restrict the availability of vitamins and other nutrients, based on assumptions of safety and trade. The successful implementation of laws based on the Codex will mean that people who believe in prevention of disease with vitamins and associated nutrients, will be unable to

supplement themselves.

This important book is a "must read" because it serves not only as a way to gain a better understanding of vitamin C and our need for it, but as a wakeup call for the benefit of humankind. Hopefully, Congress will be inundated with the message of this book again and again until they finally get the point. Then, perhaps other countries will follow the lead. Otherwise, those who hope to be able to take their vitamins throughout the future might all have to extradite themselves beyond the reaches of such an unenlightened government.

—Review by Hugh Riordan, M.D.

Parenteral Micronutrient Therapy

by Virginia Osborne, RN, ND;

Stacy Raffety R.N., LAc, ND; Dan Carter, ND
Professional IV Seminars, 2004

Softcover, 227 pages

Parenteral Micronutrient Therapy is a comprehensive instructional guide for every clinician using intravenous nutrition therapy in his or her medical practice. This book not only tackles technical complexities like osmolarity and fluid balancing, it also discusses the rationale for prescribing intravenous micronutrients and specific clinical protocols and applications.

It answers the questions of "What are the specific benefits of IV therapies to my patient?" and "Where do I begin and what are the choices involved to offer this as a safe and effective modality?"

The initial consideration is deciding which patient to offer intravenous treatments to. Although the more immune compromised patient benefits greatly due to their deficient nutrient reserve, invariably these are the same patients who may be more sensitive to the nutrients themselves and the preservatives that are added. Starting with a

lower dose or in some cases injecting a trial dose subcutaneously can assist to evaluate the degree of sensitivity. Many vitamin nutrients can be purchased in a one-dose vial, which does not contain preservatives. These have a shorter expiration period and are special ordered.

Laboratory testing is suggested before beginning therapy. Testing for G6PD enzyme is critical before initiating high dose IV Vitamin C. This enzyme's prime function appears to be in protecting the red blood cell from oxidative damage. The deficiency of this enzyme is a genetic inborn error of metabolism found in a sub population of Mediterraneans, Southeast Asians and Indians, Africans and African Americans. Although uncommon, a hemolytic event can be invoked with vitamin C for those at risk.

The authors include detailed "Incident and Emergency Protocols," describing symptoms and treatment in case of complications. There are usually few complications with intravenous therapies however, having appropriate supplies including up to date emergency medications at hand and a calm and prepared attitude results in a smooth outcome. Instilling a sense of preparedness and confidence is the most important message you can deliver to your patients receiving invasive therapies. Demonstrating an effective chain of medical authority to the patient ensures them there is a system in place in case of a medical emergency.

Numerous sample consent forms are outlined in this book as well as patient logging forms, and incident reports. Informative charts include "Most Commonly Used Vitamins and Minerals and Their Applications", "Homeopathics for Emergency Use", "Therapeutic Applications of Amino Acid Therapy", "Common Medical Abbreviations", and Osmolarity calculations.

In another section detailed descriptions and diagrams of intravenous equipment show types of needles and catheters used including central line access. The anatomical pictures are excellent outlines of exact placement

for the various types of needle insertion.

The second half of the book is devoted to "Clinical Applications of Parenteral Products." This is a wealth of knowledge for anyone offering intravenous therapies, including the experts. There are descriptions of each parental ingredient including dosage, mechanism of action, adverse effects if any, and clinical applications. The products highlighted range from herbal, homeopathic, and glandular to specific vitamin nutrients and oxidative therapies.

Growing evidence has mounted a positive response toward the benefits of IV vitamin C treating immune compromised patients and those with cancer. Its potent antioxidant activity has been found to neutralize toxic effects from some chemotherapy agents without inhibiting the effect of the drug activity. In some cases it can actually promote the anticancer action of the drug without increasing the drug induced toxic effects. Additionally, vitamin C also appears to stimulate the activity of several drug-metabolizing enzymes in the liver, broadening its indication for anyone taking liver metabolizing prescription medications. It is important to supplement with vitamin C even if it is only to normalize the body's vitamin C status.

In this book, the authors have accumulated enough resources to guide any clinician in a user-friendly format to offer IV nutrients in a safe and effective way. It is well referenced and includes referrals to reliable product suppliers. It takes conventional medicine techniques and applies them to innovative treatment protocols more suited to enhance a healthy body and prevent disease. Can we imagine the day when our family doctors will require patients to have IV vitamin nutrients to treat and prevent diseases mandated by our health insurance? We can only hope we will see that day in the not too distant future.

—Review by Cynthia Quattro, P.A., L.Ac.