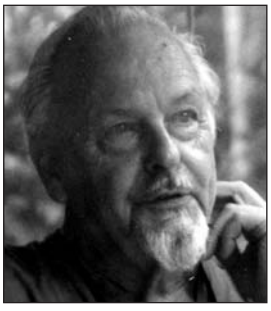
Reductionist's Rhetoric: Cinnamon vs Avandia

Jim Duke, PhD



James Duke received his PhD in Botany from the University of North Carolina, moving on to postdoctoral studies at Washington University and the Missouri Botanical Garden where he assumed professor and curator duties, respectively. Dr. Duke spends a signficant amount of his time exploring the ecology and culture of the Amazonian Rain Forest. In addition to a distinguished 30-year career with the United States Department of Agriculture, Dr. Duke sits on the board of directors and advisory councils of numerous organizations involved in plant medicine and the rainforest. He is also an accomplished musician, poet, and songwriter.

"*Recently approved drugs may be more likely to have unrecognized adverse drug reactions (ADRs) than established drugs...*" (Lasser et al, May 1, 2002)

"*Adverse drug reactions (ADRs) are believed to be a leading cause of death in the United States*." (Lasser et al, May 1, 2002)

Those quotes are taken from what I call the May Day Massacre of 2002 when Lasser et al (2002) provided information that could be interpreted to mean that ADR's are a major killer here in America, if not the biggest cause of death. Ironically, a couple of weeks later, an article in JAMA (Beckman et al, 2002) recommended that all diabetics take 4 or 5 pharmaceuticals to prevent heart disease. Now, 5 years later, we learn that one recently approved drug, Avandia, has produced many ADR's, actually increasing, not preventing heart disease. And that's why, May Day 2007, I urge a third arm clinical trial comparing Avandia with cinnamon and placebo.

Long have I argued that our FDA or some more altruistic government agency should try to fix our broken health system. (Nearly twenty percent of North Americans can no longer afford our expensive and dangerous pharmaceuticals). They could start by insisting on a third herbal arm comparing new drugs with some of the more promising herbal alternatives. Yes, they need to give the very viable herbal option a fair shake. As the bad news breaks on the FDA-approved, "evidence-based" diabetic drug Avandia, a good example of a needed third arm trial comes to mind. The FDA is already calling for more studies on Avandia.. Here's the study they should call for and support with governmental funds: We should compare Avandia with placebo and cinnamon as a third herbal arm. Only then could anyone say with any certitude which is the better choice for non-insulin-dependent diabetes mellitus (NIDDM), by far the most prevalent kind of diabetes. Don't you find it strange that we don't know whether Avandia (less than 10 years old) is any better than cinnamon for NIDDM. America needs to know! Which is better? Cinnamon is safer and cheaper. Could it be more efficacious? A benevolent government should see the importance of answering that question. Tax-paying Americans need to know if they can get cheaper help for their NIDDM from cinnamon.

A decade ago, we read in JAMA: "Adverse drug effects may account for up to 140,000 deaths annually in the United States" (Classen, 1997). This year Hurley's (2007) surly attacks on supplements enumerated fewer than 30 Americans killed by supplements (none of course killed by cinnamon). Hurly was not trying to praise the supplements. But that suggests to me that pharmaceuticals kill a thousand times more Americans than supplements. And now we learn that one diabetes drug, may have killed thousands of diabetic Americans via heart attacks. Cinnamon hasn't killed anyone. For all we tax-paying Americans know, the safer cinnamon may be as effective as the dangerous Avandia, which has been taken by >6 million people worldwide since it came on the market in 1999. Perhaps, the FDA should take some of their ill-earned pharmaceutical money to fund this independent third arm trial. Only then will the public learn how the cheap safe herbal medicine, I call it food farmacy, stacks up against the expensive dangerous pharmaceutical.

Our USDA has aggregated cinnamon and cassia in

their statistics, since most American cinnamon (*Cinnamomum verum*) was in fact the related species cassia (*Cinnamomum aromaticum*). Yes, most of the "cinnamon" purchased in the U.S. is said to be "cassia", so perhaps we should talk about "cassia" buns, "cassia" toast, and "cassia" teas. No, not really. Even the Bible includes cassia and cinnamon, sometimes in the same verse. The cinnamon toast my wife takes for upset distress and the cinnamon tea some people take for hangovers is more probably cassia. Both cassia and cinnamon contain carminative compounds. More recently Mrs Duke successfully took cinnamon to lower her prediabetic score of 108. And recent studies show that cinnamon (1/8 tsp) can treble insulin efficiency, and may be useful in adult onset diabetes (Khan et al., 2003). Conservatively cautious, I don't urge anyone to abandon Avandia and switch to cinnamon (I would myself switch in a heartbeat, hoping to save my heart.). I urge third arm trials to see if cinnamon can be competitive with Avandia, not only as to cost and safety, but also for efficacy. You see, until the spice and Avandia are clinically compared with placebo in third arm trials, no one, neither you nor me really knows which is best, though I predict cinnamon will also prove as efficacious.

The Avandia news is especially frightening since two-thirds of diabetics die of heart problems. Avandia increases that risk, apparently significantly. Even GlaxoSmithKline acknowledged its own review found a 30% increased risk. Another similar study suggested it was an increase more like 43%. On the other hand, cinnamon is good for the heart with dozens of gentle biologically active heart-friendly phytochemicals. Put some heart-friendly cinnamon on your heart friendly oatmeal, sweetening with antidiabetic Stevia!

In type 2 diabetes, either the pancreas does not produce enough insulin (a hormone that regulates sugar metabolism), or the body does not or cannot use it correctly. As a result, unhealthy levels of sugar circulate in the blood, instead of providing energy to muscles. The volunteers — who were not taking insulin — were randomly divided into six groups: one group ate 1 g cinnamon per day, a second group ate 3 g; a third group ate 6 g (ca 1/5th oz). Three control groups were given placebo capsules with matching doses of placebo. There was an improvement of ca 20% in blood sugar, cholesterol and triglyceride levels in volunteers eating as little as one gram (less than ? teaspoon) of cinnamon per day for 40 days. No advantage was seen in taking more than that amount. Significantly, the volunteers' blood sugar levels started climbing when the cinnamon was stopped. These results with a small group of volunteers — encouraging though preliminary — indicate the need for further analysis of cinnamon and its chemical components and for long-term feeding studies (Bliss, 2003).

So cinnamon like Avandia is good for NIDDM. But cinnamon, unlike Avandia, is also good for the heart. How well I remember earlier studies this decade published in JAMA (Bechman et al, 2002). A cursory summary of the establishment's heart recommendations is easily remembered as the ABCD's for cardiopathy: A for Angiotensin-Converting-Enzyme- (ACE) Inhibitors, B for Beta- Blockers, C for Calcium channel blockers, and D for Diuretics. Several different expensive pharmaceuticals can provide these benefits, often accompanied by the unwanted baggage of serious side effects. Cinnamon can provide the ABCD's. Cinnamon contains at least 5 gentle ACE-Inhibitors (not to mention nearly a dozen antiaggregants), one Beta-Blocker (epicatechin), half-a-dozen Calcium-antagonists, and 3 Diuretics.

In conclusion, I urge a third arm clinical trail, Avandia vs cinnamon vs placebo. Cinnamon is good for diabetes and for the heart. Avandia may be good for diabetes but bad for the heart. America needs a clinical comparison.

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