Scientists Get Flak Over Diet Plan

Several have resigned from star-studded advisory board of company promoting "revolutionary" nutrition supplements

When it comes to the marketplace, nutrition is in the same league as sex and spiritual enlightenment. The subject is emotional, the real product intangible, and the profits substantial. One of the latest enterprises to capitalize on this fact is United Sciences of America, Inc. (also known as USA, Inc.), a company that has grossed over $27 million in its first 6 months of operation marketing a set of diet supplements allegedly designed to counter the toxic hazards of modern life and enable users to obtain "optimum health."

Meteoric careers are not uncommon for new diets. What is unusual is that the company has enlisted a scientific advisory board of 15 distinguished investigators whose presence is being heavily relied upon to give credibility to claims about the "revolutionary" nature of the program. Over the past few months, four members have resigned from the board.

The USA collection of diet supplements has four elements, including a Master Formula containing "a unique synergistic blend" of vitamins and minerals; a fiber bar containing a "revolutionary blend of 10 fibers"; and Formula Plus, capsules containing fish oil and garlic. People are advised to drink a formula, eat a bar, and consume nine fish oil pills a day on top of three well-balanced meals. The monthly retail cost is about $135. For the overweight, there is a Calorie Control Formula designed to substitute for two meals a day in a "medically proven weight loss program."

The members of the board were evidently attracted by an opportunity to advance the cause of preventive medicine, as well as the availability of research funds from a foundation set up for that purpose. Seven of 12 $100,000 grants so far disbursed have gone to board members. However, being associated with a commercial juggernaut has brought some board members more than they bargained for. Among those who have resigned are the two Nobel prizewinners, Andrew Schally of Tulane University and Julius Axelrod of the National Institute of Mental Health. Axelrod, one of those awarded a grant, has declined to comment at all. Schally says he was being deluged with calls from colleagues and members of the press, and concluded that there was no way of escaping the implication that he was endorsing the product. "I'm not a nutritionist," he points out. (Actually, none of the board members is identified as a nutritionist.)

The Nobelists' resignations were preceded some months ago by that of Harvard Medical School cardiologist Eugene Braunwald, who backed out after concluding that his advice was not wanted and that his name was only being used for promotional purposes. Then Alexander Leaf, also of Harvard, who had been an enthusiastic early participant, resigned, saying he felt he had been "taken in" by the company. He objected in particular to being quoted in promotional material as saying that the USA nutritional plan was "the finest and most complete I have ever seen." "I have never endorsed the products," Leaf said on National Public Radio. "I'm unhappy with the whole approach—they con people into taking a lot more supplements than they need," he told *Science*. Company spokesmen insist that Leaf gave permission for the statement to be used. "He buckled under" from pressure he was getting from colleagues, says one.

Revolutionary products? *USA, Inc., claims its products are part of a revolutionary diet program.*

Last June, at a board meeting in Dallas, some board members expressed unhappiness with the use of members' names for product endorsements. So they put together a statement, to which the company agreed, saying they were only there to give advice, and that their names could not be used otherwise without their express consent. The remaining board members seem satisfied that involvement with product development does not imply endorsement.

USA, Inc., was founded by Robert Adler, Jr., 37, a Dallas entrepreneur who made a fortune on a computer that dials phone numbers and leaves recorded messages. The vice president is a former assistant U.S. attorney general, Jerris Leonard. The company marketing strategy requires little capital investment because all sales and distribution are done by customers themselves who buy products along with promotional material and videotapes and peddle them in homes and offices. Launched on $2.5 million, the company now claims to have 140,000 "associates" authorized to sell the products.

There is of course nothing wrong with scientists serving as advisers to commercial enterprises. What bothers critics is that USA, Inc., advisory board members allow their names to be prominently associated with a nutritional program whose benefits, if any, are unproven. The most vocal critic has been Harvard nutritionist Frederick J. Stare who called attention to the undertaking in a letter in the 9 October issue of the *New England Journal of Medicine*, in which he suggested that scientists' willingness to associate with the company stemmed from "naïveté and the hope of research funds." Stare told National Public Radio: "I think it's the biggest current health scam that I know of." NBC has added to criticism with a 20-minute segment on the company.

The debate over the merit of the supplement program is at present unresolvable, because it deals with nutritional questions scientists have been batting around for years. Will a healthy person who eats a balanced diet benefit from nutritional supplements? Long-term studies on toxicity and efficacy would be required to furnish an answer. But some nutrition experts doubt it. "This situation has never existed in nature before," observes Henry Kamin of Duke University, who chaired the National Academy of Sciences Committee on Dietary Al-

lowances. That panel could cite "no additional benefits" from such supplements.

The company and its advisers, though, think most nutritionists are a stuffy lot, mired in the old notion that if you don't have scurvy or rickets you're getting enough vitamins. "Academic nutritionists are . . . afraid to take a chance," says board member Robert J. Morin, a pathologist at Harbor-University of California (Los Angeles) Medical Center. "Most nutritionists are really way behind the times when it comes to the direction nutrition is and will be moving," says advisory board chairman Robert A. Good, an immunologist at the University of South Florida School of Medicine and former research director at Sloan-Kettering Institute for Cancer Research.

What's supposed to be unique about the supplement plan? Morin is one board member willing to take a stand on it. He thinks the formulas do indeed represent a "revolution in the sense that it's the first time that the ingredients were thoroughly evaluated based on the scientific literature . . . the ingredients are not that unique but what is unique is the evaluations and the amounts and the mix." USA's research director Jeffrey Fisher claims that most other supplements are not based on any scientific advice. But taking USA products is "like having these scientists as one's personal health advisers."

As a promotional videotape is at pains to demonstrate, with many shots of men in white coats and gleaming laboratory equipment, everything is very scientific. The scientific board edits a small monthly journal. A clinical advisory board of physicians around the country is being enlisted to help monitor the effects of the supplement. A long-term clinical trial is being designed (its size yet undetermined) but the outcome may be ambiguous since Fisher says the study will not be tracking what people eat in addition to the supplements.

As far as substance is concerned, promoters put special emphasis on the importance of antioxidants—particularly vitamins C and E, which bind free radicals. Says Fisher, a pathologist: "the increasing common denominator among chronic degenerative diseases is that they have free radical pathology as a part of the cause." This is the basis for the tremendous emphasis the company's publicity puts on environmental hazards, including carcinogens, and the need for protection against them.

Good, who has a USA grant to study aging in mice, believes that food supplements are essential to achieve optimum health because of their necessary role in "energy intake reduction." Good says that even in the absence of obesity, reduction of caloric intake—"undernutrition without malnutrition"—is the key to bolstering the immune system from the diseases of age and to prolonging life. He says diets based on these principles have demonstrated effects on a variety of animals, and "anything that works in animals from single cell organisms to primates is a general case and will apply to humans." Good agrees with Roy Walford of UCLA who has gained some prominence arguing that the human life span can be ultimately raised to 120 years.

One aspect of the USA diet that gains some, albeit qualified, interest from conventional nutrition experts is the fish oil supplement. Fish oil has generated a good bit of excitement recently, with evidence that the omega-3 fatty acids (found in cold-water ocean fish) can offer protection from atherosclerosis as well as other disorders including rheumatism and migraines. William Bennett, editor of the *Harvard Medical School Health Letter*, says, though, that there is no evidence that the same protection cannot be offered by eating fish twice a week. Mark Hegsted, emeritus professor of nutrition at Harvard, says marketing a fish oil supplement is "jumping the gun by a great deal." Morin, in contrast, believes fish oil will be a "breakthrough in the nutritional prevention of heart disease."

"Research support in health promotion and preventive medicine is very difficult to get."

With regard to the rest of the program, Bennett says "what I have seen of the products surprised me by their ordinariness." The Master Formula contains high levels of antioxidants and is notably lacking in iron, even though that is one of the most commonly prescribed supplements. Morin explains that iron is left out because it is a prooxidant and could be cancer-promoting.

The theory that antioxidants protect against carcinogens is an old one, says Hegsted, but the evidence for it is still scant. "We are totally ignorant of what is the optimal level," adds Kamin. "We may already be there." Similarly, he says of the fiber bar, "no one has the data on which to design [an optimal] mix."

As for the low calorie supplement, George Washington University nutritionist C. Wayne Callaway says such products have been demonstrated to be of little value for sustained weight reduction. For one thing, he says, the more you reduce calories the more likely you are to binge when you try to return to normal eating.

Nutritionist Judith Wurtman of the Massachusetts Institute of Technology says such supplements do nothing to address the key elements in obesity: emotional problems, biochemical problems including seasonal carbohydrate craving, and sedentary lifestyles. Fisher says this supplement is different from the others, which "deplete the lean body mass rather than the fat stores." Also, "I don't think emotional problems are necessarily the cause of people being overweight."

For a company that insists it is not just marketing a "diet program" but a "health program," the absence of behavioral expertise on the board is noteworthy. Although the company and its advisers readily acknowledge that the main customers for the products are the affluent and the educated, their trumpetings about having an "incredible impact on the health of the country" ignore the fact that people interested in supplements are people who are already interested in their diets, and that habits are extremely difficult to change. The company says it is addressing these matters with new videotapes on diet and on exercise.

The board members, enamored of the idea of spearheading a new era in preventive medicine, do not seem especially concerned with the sometimes controversial marketing techniques of USA, Inc. A videotape strongly implies, for example, that the American Heart Association and American Cancer Society endorse its program, by running pictures of their buildings and logos while the narrator relates that the USA products contain "the low fat high fiber diet now recommended by" these organizations. The heart association, which does not endorse supplements, has protested, and the company has promised to remove the offending segment. Another tape, which reportedly dwells on various environmental horrors, presents "an apocalyptic picture of America's future from which you could be cured by their supplements," according to Kamin.

The scientists on the board are concerned, of course, about their research. In addition to undisclosed stipends, said to range up to $20,000 annually, all are eligible to receive research funding from the USA Foundation, on whose board they also serve (the company says their contracts do not guarantee their applications priority. The Foundation's research funds are prized in an area in which more traditional funding sources are not spending much. As Leaf, who retains a grant for research on fish oil, points out, "Research support in health promotion and preventive medicine is very difficult to get." ■ CONSTANCE HOLDEN