

**It Wasn't Alzheimer's  
It Was MSG**

an exposé

by  
Adrienne Samuels, Ph.D.

(Previously published as *The Man Who Sued the FDA*)

It Wasn't Alzheimer's  
It Was MSG  
Written by Adrienne Samuels

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## **Foreword**

Four federal agencies, notably the Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), and the Consumer Products Safety Commission (CPSC) were established at different times when it became apparent that the public needed protection from harm, adulteration and deception.

The objectives of these four federal agencies were commendable. However, regrettably each agency was swiftly diverted from its original purposes, and instead protected the very interests that were creating the problems of harm, adulteration, and deception. These agencies have been infiltrated by industrial interests in a system termed the “revolving door.” Individuals from industry are appointed to the agencies, and while serving, weaken or ignore regulations intended to protect consumers. Or, they create new regulations that protect industry’s interests rather than protect the public. There are many public servants within these agencies who serve with integrity, and even become whistle blowers, but they are not the administrators who formulate policies and regulations. Upon retirement, these top echelon return to industry as highly-paid consultants/lobbyists.

For any consumer who suspects that the agency’s laxity has affected him/her adversely, it is a long and arduous journey to uncover the truth. Adrienne and her late husband, Jack Samuels are two such consumers. Both suspected that their health was being undermined by a food additive approved officially as safe: monosodium glutamate, a so-called flavor ‘enhancer,’ added to numerous foods and food products. The Samuels search for the facts was frustrating, torturous, protracted, and filled with confusion and surprises. Ultimately, their search led to understandings and amplifications. The monosodium glutamate enigma was part of a larger issue, encompassing some 3,000 direct food additives, plus some 50,000 indirect additives that have not undergone adequate safety tests; food additives declared to be safe because the manufacturers vouch for their safety without offering proof; tests designed by, and paid for by industry, and manipulated in ways so that the protocols are guaranteed

to produce results that show no harm; and input from industry and their legal teams, with little or no representation by independent health professionals or consumers.

What the Samuels uncovered with monosodium glutamate and numerous other substances with glutamic acid in a free state, is applicable to other food additives as well. For example, aspartame (trade name NutraSweet) the synthetic sweetener, has many similar features in its history, testing, and approval of being safe, despite its toxicity.

Regarding food, the FDA's original mandate was to protect consumers from harm, adulteration, and deception. If this original mandate were to be enforced, monosodium glutamate and its related substances, as well as most food additives, could not be permitted in foods. Any food or food product that is made to appear better than it is in reality, would be declared adulterated and deceptive, apart from the more important issue of safety. Monosodium glutamate, by bestowing a "meaty" flavor, can reduce or replace more costly protein. Thus it is an adulterant and deceptive. Similarly, colors and flavors (both 'natural' and synthetic), added to food to restore what was lost in processing, are adulterants and deceptive because they make the products appear to be of better quality than they are, in reality. Obviously, if foods and food products were seized due to this original mandate, supermarket shelves would be devoid of highly processed foods. What would remain would be whole foods, without questionable additives such as MSG. The results would be better foods, better health, fewer health problems, and reduced medical costs. The MSG issue leads to numerous issues of concern to all.

Beatrice Trum Hunter, author of  
*The Mirage of Safety: Food Additives and Federal Policy*



Cowardice asks the question, “Is it safe?”

Expediency asks the question, “Is it politic?”

And Vanity comes along and asks the question, “Is it popular?”

But Conscience asks the question, “Is it right?”

And there comes a time when one must take a position

that is neither safe, nor politic, nor popular,

but he must do it because Conscience tells him it is right.

---MARTIN LUTHER KING, JR.



## 1 | If It Wasn't Alzheimer's...

I don't remember 1989. Not the detail. I just remember it was devastating. For 15 years, Jack had lived with sensitivity to monosodium glutamate. For 15 years, we'd all lived with Jack's sensitivity to monosodium glutamate—but this was something different. This was something new. There were days of fatigue beyond imagination. Sometimes Jack couldn't put a sentence together; other times he just lost a critical word or two. Worst of all were the afternoons when Jack couldn't remember what he'd done in the morning.

It wasn't Alzheimer's. Dr. Levinson said it wasn't Alzheimer's, but how did he know? Did he **know** Jack's brain didn't have plaques and tangles? He didn't know that. He didn't have a picture of Jack's brain.

The symptoms would come and go, but rarely go. Jack had eliminated monosodium glutamate from his diet. He was very careful. I watched his every move, and I tell you he was very careful. So it wasn't monosodium glutamate, and it wasn't Alzheimer's, because Dr. Levinson said so. But if it wasn't Alzheimer's, then what was it?

In early 1989, Jack had put himself on a diet. Not one of those pound-a-week diets that some people do, but an eat-less-lose-faster-than-you-should diet to meet the needs of someone who found the idea of dieting distasteful and simply wanted to get the job done.

Dull? Unappetizing? Uninspired? This diet would have made anyone ill. He had grapefruit, toast, and cottage cheese for breakfast; a can of tuna fish on Wasa bread for lunch; and an insignificant—although at least varied—small meal for dinner.

The fat fell away and that was grand, but something else happened. Two weeks into the diet, Jack lost his ability to speak in whole sentences. There wasn't a thought he could get out without losing a word or two. "Fifty-four years old," Jack said to me, "and I'm falling apart at the seams." "Fifty four years old," Jack was thinking, "and I have Alzheimer's disease."

Jack made a tremendous effort to speak slowly and clearly to minimize the appearance of a problem. If you didn't know him well, his halting speech might have seemed quite natural, but if you knew him, you couldn't miss it.

Everyone had a suggestion. Some people knew it was stress, “years and years of doing what he did, and doing it well.” Jack needed a vacation.

Better yet, he was simply suffering the effects of aging. “Everyone has a little arthritis at 50,” (even if the x-rays don’t show it). And the memory loss? “Maybe Jack can’t remember things as well as he used to do, but he still has a better memory than I do.”

Researcher that I am, I checked out the symptoms of Alzheimer’s disease<sup>1</sup> and compared them to Jack’s symptoms:

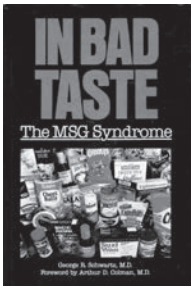
1. Forgetting recently learned information **YES**
2. Difficulty performing familiar tasks **YES**
3. Forgetting simple words **YES**
4. Getting lost in his own neighborhood **YES**
5. Poor or decreased judgment **NOT REALLY**
6. Problems with abstract thinking **NOT REALLY**
7. Misplacing things **YES**
8. Going through rapid mood swings—from calm to anger—for no apparent reason **YES**
9. Changes in personality **NOT REALLY**
10. Loss of initiative **YES**

## 2 | If It Wasn't Alzheimer's, Then What Was It?

If it wasn't Alzheimer's, then what was it?

The title of the book was *In Bad Taste: The MSG Syndrome*.<sup>2</sup> It was written in 1988 by George Schwartz, M.D., a physician who had found that reactions that came after eating food laced with monosodium glutamate would also occur after eating food that contained hydrolyzed vegetable protein, natural flavoring, flavorings, vegetable protein, and/or vegetable, chicken, or beef broth as ingredients.

Dr. Schwartz had been attending a medical convention, grabbing dinner at a Chinese restaurant near his hotel. To hear him tell the story, he'd had no problem with food the first night or the next, but by the end of the week he'd realized he'd become acutely sensitive to monosodium glutamate. How he determined he was also sensitive to hydrolyzed vegetable protein, natural flavoring, flavorings, vegetable protein, and broth we haven't a clue. But he made that determination and shared it with the world. In 1989, our oldest son suggested that his father read *In Bad Taste: The MSG Syndrome*.



Never mind the book's content. Right on the cover was a picture of the canned tuna Jack had been eating. It's not a big book, and the reading was easy. It took very little time to read it cover to cover.

Jack had long ago eliminated monosodium glutamate from his diet. Now he eliminated all hydrolyzed vegetable protein, natural flavoring, flavorings, vegetable protein, vegetable broth, chicken broth, and beef broth—and the "Alzheimer's" disappeared. Gone! Disappeared!

Miraculous? That wasn't the half of it. The general aches and pains, the joint pain that came with age? Disappeared. The chest pain that used to come and go came no more. Frequent trips to the bathroom that had disrupted Jack's sleep at night for at least a year were no longer necessary. Jack suddenly had more energy than he could remember. Moreover, all the recent signs of stress were gone.

Jack wrote to Dr. Schwartz thanking him, and asked some questions. Dr. Schwartz called to respond, and the two men developed an immediate rapport, but Dr. Schwartz couldn't answer all of Jack's questions. Why was Jack sensitive to monosodium glutamate and all the other ingredients that Dr. Schwartz had identified while other people were not? What was it about these products that made Jack ill? Had Dr. Schwartz identified all the products to which Jack would react? What could Jack take or do to prevent having a reaction, and if he did have a reaction, what could he take or do to minimize it?

Who could answer those questions?

### 3 | The Search for Understanding

We had questions, lots of questions, and we needed answers. The first ones were obvious. To what, exactly, was Jack reacting? What was the common element in the monosodium glutamate, hydrolyzed vegetable protein, and the other ingredients named in Dr. Schwartz's book? What foods could I prepare for my husband without producing reactions? Without understanding Jack's sensitivity, there was no way for him to protect himself, and no way for me to help him.

Although I'm a researcher by training, I found it enormously difficult to look for answers to questions when I didn't know what questions to ask. But with phone anonymity to cover my embarrassment, I took to the phone book and looked up "dietitian," and "nutrition," and US Food and Drug Administration (FDA). I called colleges and universities. I made phone call after phone call, and when those to whom I spoke couldn't answer my questions, I asked them to tell me who could. If there was such a thing as Google at the time, I knew nothing about it.

I don't remember his name anymore, but someone at the University of Illinois referred me to Dr. Steve Taylor as "the authority on monosodium glutamate." The Institute of Food Technologists (IFT), a trade organization, also referred me to Taylor, who was on the faculty at the University of Nebraska. The American Dietetic Association (ADA) now called the Academy of Nutrition and Dietetics, the American Medical Association (AMA), and the FDA all referred me to The Glutamate Association, the trade organization that represented monosodium glutamate.

I spoke to Richard Cristol at The Glutamate Association. He was warm and caring and assured me that Jack could not possibly be sensitive to monosodium glutamate; and he sent me a book that, he said, would prove to me that Jack was not sensitive to monosodium glutamate. Cristol also suggested that I speak to Steve Taylor, who also was warm and caring and assured me that Jack could not be sensitive to monosodium glutamate, and suggested that I speak to Richard Cristol at The Glutamate Association.

I read the book Cristol sent me: *Glutamic Acid: Advances in Biochemistry and Physiology*.<sup>3</sup> It contained the proceedings of a symposium held in May 1978 in Milan, Italy, for what seemed to be the thinly disguised purpose of appearing to prove that monosodium glutamate was safe. I knew that a significant number of

studies done by independent researchers (and not mentioned in the book) had demonstrated that monosodium glutamate had toxic potential.<sup>4</sup> But with a single exception,<sup>5</sup> researchers contributing to the book (who were supported, at least in part, by the glutamate industry) found monosodium glutamate to be harmless.<sup>6,7</sup>

My husband had a potentially life-threatening malady, and it seemed to me that by endorsing the badly flawed studies reproduced in this book, editors Filer, Garattini, Kare, Reynolds, and Wurtman were digging Jack's grave. It was only later that I began to entertain the thought that Andrew Ebert, chairman of the International Glutamate Technical Committee (IGTC), would be acting as undertaker.<sup>8</sup>

It didn't take a whole lot of brain power, just a bit of carefully focused attention and a yearning for the truth, to realize that the research reported was, for the most part, built on inappropriate methodology and/or drew conclusions that didn't follow from study results. There was, however, that one paper by John Olney, M.D.<sup>5</sup> that appeared to contain more than misinformation, and I set out to read more.

I searched the Index Medicus and read it all. When I couldn't understand what an author was saying, I went to the children's section of the library and took out elementary science books. I consulted dictionaries, encyclopedias, books and journals. Although some of the scientific details were beyond my immediate comprehension, being an experimental psychologist by training, I had no difficulty "reading" the scientific method. Clearly, there were two types of studies: those that set out to uncover the truth, whatever that might be,<sup>4</sup> and those that set out to lend credibility to the notion that monosodium glutamate was safe.<sup>6,7</sup>

I was reading constantly, almost voraciously, without finding answers to my questions. I'd discovered that some studies seemed to conclude that monosodium glutamate was a harmless substance, while others concluded that monosodium glutamate was toxic. That was very interesting to Adrienne the researcher, but told me nothing about the nature of the ingredients that caused Jack's debilitating reactions. That, after all, was what I was desperate to know.

The answers to my questions did come eventually, not from studies of the safety/toxicity of monosodium glutamate, but from individual consumers, manufacturers, food chemists, food technologists, food encyclopedias, trade magazines, people Jack met on airplanes, and above all, intuition. From those sources, we came to realize that all the adverse reaction triggers named by Dr. Schwartz contained free glutamic acid, i.e., glutamic acid that existed without being bound in protein. Then, as consumers began reporting that they reacted to products in addition to those with ingredients named by Dr.



Schwartz, we began to appreciate the fact that their reactions were always associated with ingredients that contained **manufactured** free glutamic acid, be it separated from protein through some manufacturing process or through fermentation, or be it produced by genetically engineered bacteria grown to secrete monosodium glutamate through their cell walls.

From trade journal articles and advertisements written in the early 1990s, we learned that ingredients containing processed free glutamic acid could be substituted for monosodium glutamate without sacrificing the perception of desirable taste. From the trade journal articles, we also learned that people in the flavoring industry understood there was profit to be made from monosodium glutamate substitutes that had “clean labels,” i.e., labels that gave no indication that there was any processed free glutamic acid in their products.<sup>9,10,11</sup>

From a 1994 study done by Rundlett and Armstrong,<sup>12</sup> we learned that processed food containing free L-glutamic acid invariably contained free D-glutamic acid. With that knowledge, we were able to search out information about the various impurities found in monosodium glutamate and the other ingredients that contained manufactured/processed free glutamic acid. We even found a 1977 account of the impurities present in monosodium glutamate tucked away in the files of the FDA’s Dockets Management office.<sup>13</sup>

On the Internet, we found copies of patents associated with the production of monosodium glutamate.<sup>14</sup> From those patents, we learned that since 1957, Ajinomoto’s monosodium glutamate had been made by a process of bacterial fermentation wherein carefully selected genetically modified bacteria fed on various carbohydrate media secreted glutamic acid through their cell walls—a fact that was later confirmed by a 1996 article we found in the *Encyclopedia of Common Natural Ingredients Used In Food, Drugs, and Cosmetics*.<sup>15</sup>

We also learned that the information in Ajinomoto’s patents bore little resemblance to the descriptions of monosodium glutamate production found on the website of The Glutamate Association. According to The Glutamate Association:

*“[Monosodium glutamate] is usually produced through fermentation, a process similar to that used in making beer, vinegar and yogurt. The process usually begins with the fermentation of corn, sugar beets or sugar cane,”*<sup>16</sup>

or

*“[Monosodium glutamate] is produced by fermentation, a process similar to that used in making beer, vinegar and yogurt. Carbohydrates from*

*crops such as corn, sugar beets/cane or cassava are fermented to produce glutamate which is purified and crystallized before drying.”<sup>17</sup>*

In contrast, according to Ajinomoto's patents, monosodium glutamate was being produced using bacterial fermentation, a process whereby carefully selected genetically modified bacteria secrete free glutamic acid through their cell walls.<sup>14</sup> Over time, we found discrepancies between scientific articles produced by independent scientists and claims made by the glutamate industry to be endemic.

## 4 | *Jack: Finding What We Found – One Step at a Time*

### IN THE BEGINNING

Life beyond MSG? Was there one? I don't remember.

It was 1989 and the Alzheimer's was gone. In its place, my reactions to monosodium glutamate were as before: monosodium glutamate alone caused mood swings and fatigue, while monosodium glutamate in combination with alcohol brought on anaphylactic shock. The greatest difference lay in the fact that I now realized my reactions were precipitated by all kinds of ingredients that contained processed (manufactured) free glutamic acid—not just the one ingredient called monosodium glutamate. Confusing as it was at the time, and as it continues to be, we who are sensitive to the processed (manufactured) free glutamic acid found in monosodium glutamate and all of the other ingredients that contain it, began to refer to all ingredients that contain processed (manufactured) free glutamic acid as MSG.

**Please note.** In this book, the words “monosodium glutamate” will be used to describe the food additive known as “monosodium glutamate.” In contrast, the acronym “MSG” will be used as shorthand for processed (manufactured) free glutamic acid—which is the amino acid found in monosodium glutamate, hydrolyzed protein products, autolyzed yeast, maltodextrin, and the other ingredients that cause adverse reactions popularly referred to as MSG reactions. In this book, “MSG” will never be used as an abbreviation for “monosodium glutamate.”

Armed with the knowledge that there was toxic glutamic acid hidden in processed food, and the awareness that I dared not drink anything alcoholic outside of my own home, my health was far better than it had been in years. If I planned my business meetings carefully, I could serve my investment banking clients without raising the specter that I might be dying. Life was tolerable and I was content to tolerate it.

Adrienne had taken my sensitivity to MSG more seriously than I had, and in 1989, when she read that the FDA and the U.S. Department of Agriculture (USDA) were taking public testimony relevant to the National Labeling and Education Act of 1990 (NLEA), she insisted I find out if I could attend and give testimony regarding the toxic potential of MSG. I knew there was no point to it, and I told her so. “What for? Why should I bother? It will be a waste of time. Besides, I don’t have the time.”

When I called the local FDA to ask if I could give testimony, the person I spoke to seemed genuinely excited by the prospect of having someone talk about MSG. She asked that by nine the next morning, I give her the names of the three people whom I’d bring with me. With less than 24 hours to identify MSG-sensitive people in Chicago, I called Dr. Schwartz, who was pleased to come from New Mexico to testify. Then I called and confirmed the two Chicago people whose names Dr. Schwartz had given me.

The series of NLEA hearings began Monday, October 16, 1989 in Chicago. Speakers focused on the general issue of nutrition label content. Participants generally agreed that nutrition labeling should be mandatory and nutrition labels should include cholesterol and fat content, with fats divided into saturated and unsaturated (or monounsaturated and polyunsaturated). Consumers stressed the need for serving sizes to be more uniform and suggested using common household measures, such as a cup or tablespoon.

Industry, we learned, had a different agenda. A representative from Company One testified to the need to have fat content spelled out in milligrams. A representative from Company Two testified to the need to have fat content listed per serving. Actually, each was asking to have fat content listed in a way that would leave consumers thinking they were getting less fat than they actually were.

Before the Chicago meeting, I believed it had been called to work out the details of labeling that would best provide consumers with information about the food they might buy. When I left the meeting, I understood that for the food industry, sales, translated into profit, was its only concern. It wasn’t until sometime later that I learned just how far some of these giants of industry would go to turn a dollar.

It was during the NLEA hearing that Dr. Schwartz was invited to Washington to begin a dialogue on the safety of monosodium glutamate.

That meeting would be an important step toward clear and full labeling of the MSG in processed foods—labeling that would alert me to the presence of MSG and allow me to lead a normal life. On the day before he was scheduled to leave for Washington, however, Dr. Schwartz called me to say he'd received a Federal Express letter from the FDA, declaring that his beliefs about MSG were unfounded, and his Washington trip would be a waste of time.

There was no question about it; Dr. Schwartz was cancelling his trip. He was adamant. He knew it would be nothing more than a waste of time and money. I, on the other hand, saw an opportunity that might never come again. In the end, Dr. Schwartz went to Washington and I accompanied him for moral support.

I couldn't wait to call Adrienne after the meeting.

*"We've done it! I wish you had been with us. It was incredible.*

*"There were 10 people from the FDA. Very reserved. Very cold when we came in, but they listened to us. They listened to what we had to say. Clearly, when we left in the late afternoon, we knew they cared.*

*"Young was there. Commissioner Young. FDA Commissioner Frank E. Young. He couldn't stay the whole time, but when he left he told the others they must take careful note of what we said because there was a problem here and it had to be remedied.*

*"Honey, I wish you had been with us. They just didn't understand. And now that they understand, it won't be long before all manufactured glutamic acid will be identified on food labels, and you won't have to worry ever again about me dying from hidden MSG.*

*"Not everyone saw things our way, you understand. A man name Ronk, in particular, actually looked evil. I could just see him making mental notes as though he was trying to send them by telepathy to The Glutamate Association. I wonder how long it will be before the "glutes"<sup>A</sup> find out about our meeting. I wonder if it will be Ronk who tells them, or maybe Glinsmann. I wonder if one or the other is on their payroll. But that's something we'll probably never know. And it doesn't matter, honey, because now that they know there really is a problem, they'll do something about it. Honey, I wish you could have been there."*

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A - Adrienne's shorthand for members of the glutamate industry.

## **BACK IN THE REAL WORLD...**

In short order, my excitement turned to skepticism. Days turned into weeks, and copies of the minutes of our meeting, promised by the FDA, failed to materialize. When at last they did arrive, the only resemblance to the meeting that Dr. Schwartz and I had attended was in the names of the people who had been there.

I was frustrated. I simply didn't understand how the FDA, the agency charged with overseeing the health and welfare of consumers,<sup>18</sup> could take on the demeanor of a chameleon. When Dr. Schwartz and I had left the meeting in December 1989, we believed that because the FDA now understood the problems MSG-sensitive people were facing, something would be done to remedy the situation. I don't know about Dr. Schwartz, but after receiving those minutes, I was faced with contemplating the possibility that the FDA might not be the honorable agency I thought it to be.

By the time 1990 came, Adrienne and I were picking up speed gathering information. Adrienne was researching to find answers. I was focused on finding opportunities to educate anyone in a position to effect change.

In January 1990, we recognized that MSG would always be found in hydrolyzed vegetable protein, hydrolyzed plant protein, autolyzed yeast, hydrolyzed milk protein, sodium caseinate, calcium caseinate, and anything else that was hydrolyzed.<sup>B</sup> We also had good reason to suspect that MSG would be found, at least some of the time, in ingredients called natural flavors, natural flavoring, malt flavoring, high flavored yeast, flavoring, broth, yeast extract, yeast nutrients, and seasoning.

In addition to finding hydrolysis-processed MSG in a variety of processed soups, sauces, salad dressing, sausages, processed meats, frozen dinners, and pizza, we found it in cookies, breakfast cereal, mineral supplements, bread, and cocoa mix. I'd been told, but hadn't verified the information, that hydrolysis-processed MSG could also be found in dairy products. I'd also been told that natural flavoring included in meat products often contained a hydrolyzed protein product made from pork, and it was being used in processed poultry and beef products without being identified as pork.

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B - Hydrolysis is a chemical process used for breaking down various substances including proteins. When proteins are broken into their component parts, glutamic acid (processed free glutamic acid) is released.

Much of what we learned came from books, newspapers, magazines and journals. Some things came to us through people who volunteered information. To find other things, we traveled.

On Thursday, February 8, 1990, I flew to San Francisco to testify before a committee of the Board of Supervisors of the City and County of San Francisco. I'd been invited by Supervisor Wendy Nelder, who with Supervisor Angela Alioto, had drafted an ordinance requiring San Francisco restaurants to disclose the presence of MSG on their menus. Nelder and Alioto were presenting that ordinance to a committee of the San Francisco Board of Supervisors.<sup>19</sup>

On the appointed day, I met briefly with Nelder, who asked me to visit the others before whom I would testify. All, however, were too busy to see me. When I later entered the room where the ordinance was to be considered, the cold silence emanating from those super-busy people bordered on hostility. It was clear that no ordinance would be approved that afternoon.

As a scheduled speaker, I made a brief statement in support of the ordinance. Then, from the audience, Steve Taylor rose to inform the group that he just happened to be in San Francisco, and had read that an ordinance to require the labeling of MSG on restaurant menus was being considered. Taylor explained that he felt obligated to come to the meeting and inform the commissioners that they would be making a terrible mistake in labeling MSG because he knew it was absolutely safe. I found it interesting that he forgot to tell the Supervisors he was on the payroll of The Glutamate Association and/or the IGTC.<sup>8</sup>

If I'd thought about it at the time, I might have noticed that there was great similarity between San Francisco and what Dr. Schwartz and I had experienced in Washington a month earlier. The settings were different, but the involvement of the glutamate industry had been the same. In San Francisco, we saw the glutes represented by Steve Taylor. In Washington, the glutes were apparently represented by some person or persons at the FDA. In both cases, any material presented by MSG-sensitive people would be ignored. There'd be no discussion of the toxic potential of MSG.

On June 18, 1990, Adrienne and I hosted the first Chicago area meeting of the National Organization Mobilized to Stop Glutamate (NOMSG). On June 20, we held a NOMSG meeting at the Skokie Public Library.

On June 21, I made a presentation before my Kiwanis Club. In all cases, the turnouts were modest.

On September 5, we flew to Washington, where Adrienne testified before the Advisory Committee of the Food and Drug Administration.

Sometime in early 1990, I'd become aware that a board member of a hospital I was serving also sat on the board of the AMA, an organization I was most interested in approaching. Not being shy, I'd asked for an introduction, hoping the AMA would allow me to formally request its assistance in having MSG labeled. Where once I'd been reluctant to pursue appropriate labeling of MSG, now I was determined that MSG should be identified when used in processed foods.

My meeting was held on September 26, 1990 with an 8-10 member special committee comprised of AMA executives. The committee members were extremely rude, and when the relatively short meeting ended, all but one of them quickly left the room. The remaining gentleman apologized for the manner in which I'd been treated. He told me that two years earlier, William Crook, M.D., a pediatric allergist, had appeared before the same group asking the AMA to endorse his finding that candida had become a major medical problem. The AMA member went on to say that Dr. Crook had been treated as rudely as I had, even though he wasn't as strident in his presentation. He then reported that although not well received by the AMA, Dr. Crook had gone on with his work and now candida was accepted as a legitimate medical diagnosis. The AMA member suggested I keep up my work on MSG, and perhaps the outcome would be the same for me as it had been for Dr. Crook.

I reflected on what this doctor had told me. It occurred to me that the difference between Dr. Crook's case and my case might lie in the fact that in my case, but not his, there was a rich and powerful industry determined not to lose the cash cow it had in flavor enhancers, even while knowing that MSG was harmful.

On October 21, we returned to Washington and spent seven days during which we visited Jim Turner (Dr. Olney's lawyer and one of the original Nader's Raiders), who shared documentation of the MSG "controversy" dating back to 1969. Gailon Totheroh and his television crew from the Christian Broadcasting Network (CBN) interviewed us. We visited friends who might have friends in high places. We stayed at



the Residence Inn in Bethesda, where we had a full kitchen and I could cook our meals.

At the time, Totheroh worked for Pat Robertson at CBN News. A few years earlier, Robertson had done a segment on the dangers of aspartame, reporting that he'd begun to have difficulty speaking, pulling words and connecting thoughts. Then, with the help of his personal physician, and after extensive testing, someone had recalled that Robertson had recently begun drinking diet soda that contained aspartame.

We heard this story from a friend who'd seen Robertson's first program on the hazards of using aspartame. The following day, I called the 700 Club and explained to Totheroh that if Robertson was reacting to aspartame, he'd also likely be sensitive to MSG. Six months later, I received a call from Totheroh indicating he was ready to do a segment on MSG. The interview that took place in Washington was the first of a number of segments that Totheroh did for the 700 Club on the dangers of MSG.

Toward the end of the year, we attended our first meeting of the Nutrition for Optimal Health Association (NOHA), an organization dedicated to educating people on the health benefits of sound nutrition. It was at a NOHA lecture that we first met Beatrice Trum Hunter, the author of many fine books on health issues, and former food editor for Consumers' Research. I'd hazard to say that there's no person more knowledgeable on health issues than Hunter, no person with more integrity, and no person more pleased to share her knowledge with others. I'm proud to be able to call her a colleague and friend.

On Friday, December 28, we visited Drs. John Olney and Madelon Price at Washington University in St. Louis. Adrienne had questions about the animal research Olney had conducted in 1969 and the 1970s,<sup>20</sup> and the badly flawed industry-sponsored studies with which the glutamate industry had challenged his findings.<sup>6</sup> Price was a colleague of Olney, and had worked with him on a number of studies.

We came away from that meeting with a far better understanding of what the research climate had been during the '70s, and with tremendous respect for Dr. Olney, a brilliant researcher who'd put his own career at risk by standing up to the glutamate industry.

As we moved from meeting to meeting and from place to place, we were gathering information. At the same time, Adrienne was actively soliciting help from people who might help her understand the nature of MSG, and she was reading everything she could find on the subject.

I didn't realize it at the time, but it seems that Adrienne was always writing. Some time later, I saw a list of the titles she was considering for her book, a book, she told me, that no one would publish, and therefore, no one would read.

Actions Speak Louder than Words  
Why do They Want to Murder My Husband?  
The Great MSG Conspiracy  
How to Succeed at Being a Con Artist

She must have spent most of 1990 in the library. By January 1991, she'd read everything she could find that might be remotely related to MSG. She'd labored through card catalogs in rooms without air conditioning, and then turned to the Index Medicus bound in unwieldy tomes to unearth the secrets of the glutamate industry.

When everything was put together years later, what had she found?

She'd come to realize that any glutamic acid ingested as a single amino acid would cause MSG reactions in people who exceeded their tolerances for the substance. She'd also come to understand that this processed free glutamic acid (MSG) could be intentionally produced/manufactured in food or chemical plants by acid hydrolysis, autolysis, enzymolysis, or bacterial fermentation, and MSG would be produced, possibly unintentionally, when a protein source was left to ferment. She found that MSG can be produced through a complex cooking process wherein a product referred to as a "reaction flavor" is produced from a combination of specific amino acids, reducing sugars, animal or vegetable fats or oils, and optional ingredients including hydrolyzed vegetable protein.<sup>21</sup> It was only later that she would learn that acid hydrolyzed proteins contain carcinogenic mono and dichloro propanols,<sup>22</sup> and reaction flavors contain carcinogenic heterocyclic amines.<sup>23</sup>

## IT COULDN'T BE! OR COULD IT?

As pieces of the puzzle began to come together, we began to give serious consideration to the discrepancies in the published literature: the so-called scientific studies. We knew from personal experience as well as from reports of others that adverse reactions such as asthma, heart irregularities, and migraine headaches could be caused by processed free glutamic acid (MSG). We also knew from well-done published studies that MSG kills brain cells, disrupts the endocrine system, and causes retinal degeneration.<sup>20</sup> How could it be, then, that the glutamate industry was able to produce studies from which it could conclude that MSG was safe?

Its animal studies were easy to understand. John Olney had told us how the glutes produced studies they claimed were failed attempted replications, with procedures different enough to guarantee that toxic doses had not been administered, or that all evidence that nerve cells had died would have been obscured. Criticisms of those animal studies had been published, but the key to understanding the human studies eluded us.

In the privacy of our kitchen, Adrienne and I hashed and rehashed one study after another, trying to understand how data could be manipulated to come up with the predetermined conclusion that monosodium glutamate could be considered a harmless flavor enhancer. We could see that each of their studies produced negative results (there was no difference between the reactions of people who'd ingested monosodium glutamate and those who hadn't)—which was interesting, but **proved** nothing about the safety of monosodium glutamate.

Finding no difference between two groups doesn't **prove** there's no difference between them. The following examples illustrate the reasoning.

*Example 1:* Suppose it's known unequivocally from space missions that there's life on Mars, and all Martians (group 1) have two heads. One day, an alien spacecraft lands in your backyard, and several aliens emerge (group 2). If the visiting aliens had three heads, we'd know they weren't from Mars, and there must be life on other planets. (There's clearly a difference between the two groups of aliens.) However, if the visiting aliens had two heads (just like the Martians), they might be from Mars, or they might come from another planet. Perhaps there are two-headed aliens on another planet.

*Example 2:* Suppose that subjects are given purple dye number 12 or a placebo, and the number of headaches reported by each group is the same. If reports of headaches had been significantly greater in the group given purple dye, we could have concluded, with a certain amount of confidence, that purple dye caused headaches. However, since reports of headaches were approximately the same for both groups, we wouldn't know what to conclude. It might be that purple dye doesn't cause headaches. It might be that subjects were eating something with purple dye in it during the studies, giving the placebo group headaches, or that purple dye only causes headaches in females and all the subjects were males.

Drawing conclusions based on failure to find a difference is grossly inappropriate.<sup>24,25,26</sup> Given the statistical model used in the glutamate industry studies, rigorous demonstration of the truth of the null hypothesis (that there's no difference between groups) is a logical impossibility.<sup>24</sup>

Failure to find a statistically significant difference between groups may provide useful information for planning your next experiment, but it proves nothing. If you find something, then you find it. If you don't find something, it might be because it's hiding, because you don't look in the right place, because you're inept, or because someone paid you not to find it. Yet, the glutamate industry people have successfully used these negative studies as basis for asserting that monosodium glutamate should be considered a harmless flavor enhancer.

Through careful reading of these studies,<sup>7</sup> we had become aware that none met the assumptions of the statistics used and cited, so conclusions drawn from each and every study were invalid.

But there was something more. In the double-blind studies, where subjects ingested monosodium glutamate on one occasion and a placebo on another, researchers reported that there were as many responses to placebos as there were to monosodium glutamate test material. And that, we knew, could not be true. Unless, of course, those placebos were not truly inert, as placebos must be.<sup>C</sup> But that was unthinkable. It was unthinkable that anyone—anyone—would lace **placebos** with material that might cause adverse reactions.

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C - Placebo: An inactive substance or preparation used as a control in an experiment or test to determine the effectiveness of a medicinal drug. <http://medical-dictionary.thefreedictionary.com/placebo>

By the beginning of 1991, however, we were thinking the unthinkable. So it was that on February 4, 1991, at the Federation of American Societies for Experimental Biology (FASEB) hearing on the Safety of Amino Acids Used in Dietary Supplements, I raised the question that should have immediately removed monosodium glutamate from the GRAS (generally regarded as safe) list. I questioned the propriety of placebo material being used by the IGTC in its double-blind studies of the safety of monosodium glutamate.<sup>D</sup>

It wasn't quite a shot in the dark, but it certainly was a long-shot—and I won the prize. Before I was done speaking, IGTC chairman Ebert was on his feet, protesting that the glutamate industry's integrity was being impugned.

The long-shot paid off immediately, although we didn't know it for another two years. In a letter dated February 6, 1991, Sue Anne Anderson, Senior Staff Scientist with the Life Sciences Research Office at FASEB, asked Ebert for information about the vehicles used for administration of monosodium glutamate and placebos in IGTC-sponsored double-blind studies. In response, a March 22, 1991 letter to Anderson from the IGTC chairman stated that “since the completion of the work described in [1978], the sample has been modified to replace the sucrose with the low-calorie sweetener aspartame in both the placebo and sample with MSG.”<sup>27</sup>

Translated for those who might not immediately understand what was being said, Ebert had admitted that since 1978, all the placebos in double-blind IGTC-sponsored studies had been laced with aspartame—an ingredient that contains an amino acid known as aspartic acid, which causes brain lesions, endocrine disorders, migraine headache, depression and all the other adverse reactions that can be caused by the free glutamic acid found in monosodium glutamate, hydrolyzed protein products, autolyzed yeast, etc.<sup>28,29</sup> Today, we know that all of the industry-sponsored studies were of similar design, created by, or with the cooperation of IGTC chairman Ebert; that the details varied only slightly; that all failed to meet the requirements of the statistical models on which their conclusions were based; and all used aspartame in placebos<sup>7</sup>—leading us to conclude that taken as a whole, the glutamate industry studies bordered on, or were flawed to the point of being fraudulent.

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D - All the double-blind studies that claim to support the notion that monosodium glutamate is safe for human consumption acknowledge that the IGTC played a role in producing them. See Appendix 2.

## GETTING TO KNOW THE FOOD INDUSTRY'S FDA

It was 1993 before we discovered that Ebert had responded to Sue Ann Anderson, admitting that the placebos in the IGTC-sponsored studies were laced with aspartame. We were in Washington, DC, to testify before the FASEB Expert Panel taking testimony on the safety of monosodium glutamate in food when Adrienne became aware, for the first time, that all communications with the FDA were filed in files called dockets, housed at the Docket Management Office in Rockville, Md. But not until the day before we were scheduled to leave Washington did it occur to Adrienne that it was imperative she read all the dockets pertaining to MSG. It was nearly Dockets closing time on our last scheduled day in Washington, and I was literally badgering Adrienne to finish and leave—which she refused to do. Instead, she passed me a number of folders and asked me to go through them in the hope that I might find something, but more for the sake of keeping me quiet.

“My name! Here’s my name!”

I saw my name in a copy of testimony given February 4, 1991 by Andrew Ebert on the “Evaluation of Amino Acids and Related Products.”<sup>30</sup> I’d previously seen a copy of that testimony, and had found nothing noteworthy in it, but as I looked through Ebert’s testimony, and read from documents in the docket that followed it, I found his letter to Anderson stating that the placebos being used by IGTC researchers contained aspartame.<sup>27</sup>

Poor Andrew Ebert. Betrayed by the FDA’s recordkeeping system. We can only guess that Ebert had no way of knowing what I knew about the composition of his placebos, and didn’t dare lie. In fact, while the statements of the glutamate industry are often deceptive and misleading, I don’t remember seeing more than one out-and-out lie. They have been known to fail to answer questions, and to respond to question with irrelevant answers; yet, to my knowledge, have never been challenged by the FDA, USDA, or EPA. The fact that Ebert responded to Anderson, and actually answered her question, is intriguing. Even more interesting was the fact that Anderson asked the question in the first place.

As you might imagine, I brought the information to the attention of both FASEB and the FDA. I was still naïve enough to believe the FDA might consider the fact that there were studies clearly demonstrating that MSG

causes brain lesions, endocrine disorders, migraine headaches, seizures, irritable bowel, heart irregularities, depression and more, while all the studies submitted to the FDA as evidence of the safety of MSG—when reviewed in their entirety—had to be considered fraudulent. That’s what I believed. I was naïve.

We’d started our quest with one question: “What is the nature of the products that cause my reactions?” Before we found the answer to that question, we’d found the very disturbing answer to another we’d never considered. The question? Given that there’s incontrovertible evidence that MSG has toxic potential, how could the glutamate industry produce human studies from which it could conclude MSG was safe? The answer? The glutamate industry produced these studies by lacing the placebos in its double-blind studies with aspartame.

We’re from Chicago, and we’ve heard it said more than once that public officials can be bought. We’d heard you could get a highway contract with the city or state if you knew the right people, and you could get a building permit without waiting if you had the right connections. We had no reason to doubt that, but neither Adrienne nor I had ever considered there might be people so filled with greed that they would maim and kill others for profit.

We’d been at a disadvantage. Law enforcement will tell you that to track perpetrators you have to think like perpetrators. You have to get inside their heads to catch them, and we’d had no practice. In 1993, however, we were beginning to play catch-up. It had become abundantly clear that, in the words of Michael Crichton, “business is war,”<sup>31</sup> and we knew for certain that if the glutamate industry was being run as a war, then both it and the FDA were enemy combatants.

It wasn’t until years later that it became clear to us that much of corporate American was involved in intentionally feeding toxic, endocrine-disrupting, adverse reaction-causing manufactured amino acids to every American, the unborn as well as the very young, mature, and elderly. We’d not yet read enough to suspect that the FDA might be little more than a front for both the pharmaceutical and food industries, and that the whole of its endeavors to maintain the power of a few through dumbing down Americans with toxic food and pharmaceuticals had been sanctioned and made possible by the people you and I had elected to public office.

## **WHERE WERE WE AT THE END OF 1990?**

Dr. Schwartz and I had been to Washington. We'd seen the FDA in action on behalf of the glutamate industry. Adrienne had reviewed the literature and found there was nothing to suggest that MSG is safe. We didn't yet understand the FDA/industry partnership—neither the fact that there was such a partnership nor how well developed and deep rooted it was. But we knew we were looking at something much more ominous than sloppy research.

## **AND THEN IT WAS 1991**

### ***Government: Active in Defense of Industry***

In 1991, we picked up chatter about a new study to be commissioned by the FDA on the safety of monosodium glutamate. There was some talk at the time about hiring someone other than FASEB to do the study, but it didn't happen. It crossed my mind that the thought of another organization possibly failing to come up with the “right” conclusions made FASEB the FDA's ultimate choice. FASEB was an august body that, among other things, had never found anything wrong with any food substance studied for the FDA, not even trans fatty acids.<sup>32</sup>

### ***The Glutamate Industry in Action***

In 1990 and 1991, there was an eruption of glutamate industry literature/propaganda aimed at health-conscious people. The glutes know what they're doing; they hire professionals to accomplish their goals. The most notable professional organization has been the International Food Information Council (IFIC), which represents itself as an “independent” organization, and sends attractive brochures to dietitians, nutritionists, hospitals, schools, the media, and politicians proclaiming the safety of monosodium glutamate. An IFIC “Communication Plan” dated July-December 1991 detailed methods for scuttling a “60 Minutes” segment on MSG, or, failing that, provided for crisis management.<sup>33</sup>

But there's more. Much more. The glutes have given generous donations to influential bodies such as the American Dietetic Association.<sup>34</sup> We've found glutamate industry material in the Mayo Clinic Nutrition Letter,<sup>35</sup> the University of California Berkeley Wellness Letter,<sup>36,37</sup> and material published by the American Association of Retired People (AARP).<sup>38</sup>



We've seen their propaganda in popular magazines, too: in *The Oregonian*, *Better Homes and Gardens*, *Women's Day*, and *Family Circle*. Each time one of these articles came to our attention, one of us wrote to the author or the editor—who couldn't have cared less.

Although it appeared to us that the glutes had Washington sewed up, they were clearly nervous. They have a history of turning out studies and mass producing propaganda whenever the integrity of monosodium glutamate is threatened, and that's what they were doing. I thought the activity might have stemmed from the fact that we'd sent the FDA a copy of Adrienne's review of the literature,<sup>39</sup> and the FDA was calling for a study of the "safety" of MSG to counteract it; but Adrienne's review hadn't been printed until January 1991, so it couldn't have been that.

The glutes were certainly aware that Adrienne and I were asking questions—questions about MSG and questions about their research, because we often addressed those questions directly to them. Possibly more worrisome for them had been the 1988 publication of *In Bad Taste: The MSG Syndrome*, and the formation of the new consumer group, NOMSG. In 1990, the glutamate industry had no way of knowing what was on NOMSG's agenda.

It wasn't until sometime later that we began to understand the structure and function of the glutamate industry's propaganda/crisis-management system. One of their stock strategies for drawing attention to themselves and the safety of monosodium glutamate has been to set up workshops, symposia, and meetings that are invariably announced and/or followed by press releases that extol the virtues of monosodium glutamate—releases often sent to those who take paid advertising from The Glutamate Association, the IGTC, or one of their member food or drug companies.<sup>40</sup> They also publish the papers that come from their workshops, etc. in the supplement sections of industry-friendly journals that accept such papers without peer review.<sup>41</sup> Few researchers will make a distinction between articles that come through the peer review process and those that don't.

In August 1991, for example, the glutes held an MSG workshop organized by their longtime researcher and spokesperson, L. J. Filer Jr., M.D., Ph.D., who by that time was emeritus professor of pediatrics at the University of Iowa College of Medicine in Iowa City.<sup>8</sup> Predictably, presenters included IGTC researchers and spokespersons Susan

Schiffman, Ph.D., L.D. Stegink, Ph.D., Steve Taylor, Ph.D., and John Fernstrom, Ph.D., all of whom were referred to as a “group of experts representing a variety of disciplines.” We knew them to be representatives of a variety of disciplines reclining under the umbrella of the IGTC.<sup>8</sup>

### ***“60 Minutes”***

In early 1990, I’d become aware that the MSG segment was in the works, and over the course of its development, I’d provided information to producers Grace Dickhaus and Roz Karson.

In March 1991, a producer for the CBS news show called Ajinomoto announcing that they were thinking of doing a segment on Ajinomoto’s product. According to the *Wall Street Journal*, a group of trade associations thereupon launched one of the largest pre-emptive campaigns in public relations history. Specifically, “A crisis-management team specializing in ‘60 Minutes’ damage control has been hired to help the glutamate industry execute an elaborate game plan to forestall a repeat of the 1989 Alar-on-apples scare.”<sup>42</sup> It was a copy of that crisis management team’s “July-December 1991 Communications Plan”<sup>33</sup> designed (or possibly simply distributed) by the IFIC that I’d sent to the *Wall Street Journal*. We’d received the “war plan” for IFIC’s assault on “60 Minutes” from an anonymous donor on September 4, 1991.

### ***FDA Commissioner Dr. David Kessler***

In December 1990, David A. Kessler, M.D. had been appointed FDA Commissioner. He was making big headlines for himself and the FDA. He’d “hit hard” at misleading and deceptive advertising. Manufacturers withdrew such advertising under Kessler’s pressure.<sup>43</sup>

But what had Kessler accomplished that would be meaningful to the people who had life-threatening sensitivities to monosodium glutamate and hydrolyzed proteins? He’d not responded to letters Adrienne, George, or I had written about the need to identify all hydrolyzed proteins found in food. To be sure, people had written replies to our letters on his behalf, but no one ever addressed the issue of labeling. Did he know? Did he care? If he was leaning hard on false advertising, why was he doing nothing about the false advertising done to promote products that contained MSG? Why was he “hitting hard” on false advertising paid for by industry, while doing nothing about the deceptive

and misleading practices of members of his own staff within the FDA who were paid with our tax dollars?

A friend suggested that MSG-sensitive people would never have another opportunity like the one now afforded by Dr. Kessler. Visible, motivated, and riding a wave of popularity, he was a man who could make a difference to MSG-sensitive people. My gut feeling was that Dr. Kessler, a man who was going somewhere, was also a man who knew how to get where he was going. He might have it figured out that if he stepped on the wrong food industry toes, he'd be tripped up in his movement. Dr. Kessler might feel it wasn't worth risking the ire of Ajinomoto, Archer Daniels, Hercules, Staley, and others just to make it possible for MSG-sensitive people to avoid accidentally eating food that contained MSG. Dr. Kessler did nothing for us.

### ***A Shot in the Dark***

On February 4, 1991, I gave testimony in Washington, DC before the FASEB hearing on the Safety of Amino Acids Used in Dietary Supplements. The open meeting, required by law, was held for public input into the safety of amino acids in dietary supplements, which was being debated by the FDA following the L-tryptophan debacle: when more than 35 people died and over 100 became disabled following ingestion of L-tryptophan sold as a dietary supplement.<sup>44</sup> We were fairly certain it would be L-tryptophan that would take the center stage, but on the chance that I'd be able to give input on the toxicity of processed free glutamic acid (MSG), I was determined to make the trip. It was at the Dietary Supplement meeting that I stood up and suggested there was something wrong with the glutamate industry placebos, leading to the loud protestations of IGTC chairman Ebert and the eventual disclosure of the fact that the IGTC had been lacing the placebos supplied to IGTC researchers with neurotoxic, endocrine-disrupting, adverse-reaction-causing aspartame.

(Actually, Ebert didn't mention the fact that aspartame was "neurotoxic, endocrine disrupting, and adverse reaction causing." I just added that because it's true.)<sup>45</sup>

## ***“No MSG Added”***

In April 1991, we were exploring the possibility of suing companies that falsely advertised “No MSG,” “No Added MSG,” or “No MSG Added” on their products.

Stouffer's, for one, had undertaken a campaign of deceptive and misleading advertising. Stouffer's stated on labels that there was no MSG in its Lean Cuisine product line. It used the words “No added MSG” or “No MSG added,” but the product contained hydrolyzed protein, which invariably contains MSG. Some of us filed complaints with the Illinois Attorney General. Some filed complaints with the Federal Trade Commission (FTC). Both appeared to be extremely interested. “Deceptive” and “misleading” were words those two offices didn't like. There was hope they could and would do something about the false advertising.

What if the media picked up on it? What if the media told the American public Stouffer's had been deceptive and misleading in its advertising? The American public might even come to understand that MSG sensitivity was really sensitivity to all glutamic acid in all hydrolyzed protein products. To make that happen, we'd have to put considerable effort into writing press releases and sending them to the media. It would be work, yes, but it might be worth the effort.

On July 8, 1991, before we mobilized our efforts, Stouffer's called Dr. Schwartz and told him that due to pressure from the FTC, they had withdrawn their “No MSG” claim.

Stouffer's wasn't the only company whose deceptive and misleading labeling had come to the public's attention. Eleven State Attorneys General, led by Robin Blecher, Deputy Attorney General from Pennsylvania, felt lawsuits against those who mislabeled products containing MSG would be appropriate. In 1991, in response to lawsuits, Consent Decrees were entered into by Pepperidge Farm Incorporated<sup>46</sup> and Matlaw's Food Products, Inc.,<sup>47</sup> and in 1992, a Consent Decree was entered into by S&B International Corporation.<sup>48</sup> In 1990, Union Foods agreed to pay \$153,000 to settle a civil complaint filed by the Ventura County California District Attorney's office.<sup>49</sup>

“This is a classic case of false advertising,” Ventura County District Attorney Michael Bradbury said in a news release. “It is widely known that many consumers do not want to ingest MSG.”<sup>50</sup>

Even the FDA took part in the activity. They sent Fantastic Foods, Inc. a Regulatory Letter after finding that “The Tomato Vegetable and Curry Vegetable Instant Ramen soups are misbranded as defined in Section 201(n) of the Act since the statement ‘NO MSG ADDED’ is false and misleading in that the label fails to reveal a material fact, namely that monosodium glutamate (MSG) is added to the product in a significant amount as a natural constituent in the ingredient, hydrolyzed vegetable protein (HVP).”<sup>51</sup>

While all this was going on, we were exploring the possibility of commissioning analyses of MSG-containing products to find out just how much MSG there really was in processed food. We had every reason to believe that figures used by the glutamate industry were unreliable.

### ***And the AMA...***

Again, Adrienne and I weren’t the only people concerned about the toxic effects of MSG. In 1991, the AMA passed a resolution submitted by its Michigan chapter calling for the organization to encourage the FDA to “...mandate labeling of all foods containing even small amounts of additive L-glutamic acid so that individuals wanting to avoid this substance may do so.”<sup>52</sup> How it sneaked past the glutamate industry observers we’ll never know, but they remedied the situation in 1992 when the AMA Council on Scientific Affairs recommended:

*“...that until such time as L-glutamic acid in any form has been shown to pose a significant public health hazard, or until biological non-equivalence of monosodium glutamate and L-glutamate has been demonstrated, the AMA should not advise the FDA to mandate the labeling of all foods containing added L-glutamic acid.”*<sup>53</sup>

### ***Day by Day***

Dialogue with the AARP was continuing. Dialogue with the FDA was ongoing. Adrienne had developed relationships with food editors from most of the major newspapers. From time to time, one of them carried a story about MSG that included a mention of consumer concerns.

In 1991, Adrienne circulated her report, “MSG: A Review of the Literature and Critique of Industry Sponsored Research,”<sup>39</sup> sending a copy to the FDA. An article, “Monosodium Glutamate: Food for Thought but not for Eating,” was published in *Conscious Choice*. In that year, she also finalized something she called “Critique of Selected Materials Distributed by The Glutamate Association Consumer Education Committee,” which she generously shared with the FDA. As if they cared.

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I found I was writing, often for myself...things I could say to the computer but to no one else. Private things. Things no one else would ever see. I couldn't tell the world that Jack was mean or angry or irritable, even if it was just when he was exposed to MSG. I couldn't even tell a friend. By this time, we knew our phones were bugged, at least from time to time (our fax machine told us that), so a “secret” never got told on the phone. I could just see someone at Ajinomoto picking up on something I said and using it to discredit Jack. I never bothered to figure out just how they would do that, but I knew they were pros.

Every six months or so, I'd put down my mixing spoons and my pencils, turn off the computer and the stove, climb the stairs, flop down on my bed, and have a good cry. No one would ever know that I was frightened, thinking of what the consequences of doing what we were doing might be.

The Alzheimer's was gone, or so it seemed, but the signs and symptoms of Alzheimer's, which now could be understood as adverse reactions to MSG, persisted. They appeared every time Jack got into MSG. Well, not exactly. It's more accurate to say that every time one of those signs or symptoms occurred, careful scrutiny of what Jack had eaten revealed a hidden source of MSG.

That's worth repeating:

**Every time Jack went into anaphylactic shock, I could find a hidden source of MSG in a product he'd eaten.**

We were beginning to understand what Ajinomoto was doing. First, they insisted that only double-blind studies could be legitimately used as evidence that people couldn't tolerate MSG. Legitimate? How legitimate is a double-blind study done in a half-hour in a physician's office when the patient reacts with a migraine headache after 12 hours? What better proof of sensitivity could there be than people who are otherwise healthy getting sick after ingesting MSG?

Second, they set about keeping consumers from knowing which processed foods contained MSG and which ones didn't. They'd hide MSG in ingredients that give no clue to the fact that they contain MSG—ingredients like sodium caseinate, hydrolyzed soy protein, and natural flavoring, for example. That way, consumers would have no way of knowing whether or not there was MSG in products they'd recently eaten. Finally, just for good measure, the Campbell Soup Company, a member (or former member) of The Glutamate Association or the IGTC, would advertise “No MSG Added” on the labels of products that contained MSG. They were joined by countless others.



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## ***Outside of the United States***

Outside the U.S., avoiding MSG wasn't yet a problem. On February 23, 1991, Adrienne and I flew from Chicago to Kenya and then moved on to Tanzania. From Nairobi, we drove with our group of eight into Tanzania to Lake Manyara and then to the Serengeti National Park—deep in the heart of the savannah on the famous migration corridor. Our group was small, the animals were magnificent, and we had the good fortune of seeing the migration—mile after mile of wildebeests and others strung out across the savannah, including females with little ones in tow.

We had the finest accommodations and the best food available. Sometimes we slept in camping lodges; sometimes we slept in tents. Food was plentiful, good tasting and, for the most part, free of MSG. I don't have to tell you that we'd researched the food situation thoroughly before taking off to this other side of the world. Knorr was the only thing I had to stay away from. That wasn't a problem, since there was plenty of good fresh food prepared without benefit of Knorr bouillon or sauces.

## **MOVING INTO 1992**

By 1992, we fairly well knew the names of ingredients in which MSG was hidden, but didn't necessarily know how the MSG got there. The food industry hadn't yet embarked on its out and out campaign to invent new MSG-containing ingredients with unrecognizable names. At the FDA, nothing had changed, but we were beginning to more easily recognize instances of FDA/industry cooperation.

In January, President George H. W. Bush was taken ill in Japan, not from a typical Japanese meal, but from a U.S.-style meal. I watched his reaction replayed on the television, and it sure looked like an MSG reaction to me. A little MSG with a little wine used to throw me into anaphylactic shock before atrial fibrillation replaced anaphylactic shock as my primary reaction to MSG. I had to laugh when someone on President Bush's staff told me it wouldn't have been MSG-related because he was eating American-style food.

Late in the year, Adrienne started planning a wedding for our oldest daughter. I was adamant about being able to eat at a wedding I was paying for, and that wasn't easy. It seemed that another MSG-containing ingredient was being added to the food supply every other day.

### ***Sugar***

The issue of sugar was interesting. Early on, I found that I reacted to some recipes containing sugar, but not all of them. It was clear the amount was very small, because in most cases I'd feel generally bad, but not terrible. By trial and error, backed by great determination, I found I didn't get sick when I used Domino brand sugar, but I always got sick when C&H sugar was used.

As it happened, there was a food broker down the hall from my office, and we had become friends. One of his specialties was sugar, and he knew the president of C&H personally.

The C&H president was interested. He couldn't understand why his sugar would be different from others, since raw materials were often procured from the same sources, and the process of making sugar was the same throughout the industry. He did, however, agree to turn the problem over to his laboratory, and get back to me with an analysis of



his sugar. In the end, he wrote that there was a small amount of free glutamic acid in the final sugar product, but no one had a clue as to how it got there. The laboratory chemist said it was so small that no one could possibly react to it.

Actually, “it’s such a small amount that no one could possibly react to it” is a basic component of the glutamate industry propaganda program. When consumers call companies that sell products containing MSG but give no clue to its presence, if other diversionary tactics fail, glutamate industry representatives will admit that MSG is in a product, but in such a small amount that no one could possibly react to it. Funny, isn’t it, that no one says that about peanuts. No one says that just a little bit of peanut, peanut butter, or peanut oil couldn’t possibly cause a reaction. Could it be that the peanut industry isn’t as well connected as the glutamate industry?

## ***Cancer***

In August 1992, we attended a meeting of the American Chemical Society in Washington, DC., where the FDA’s Dr. Lawrence Lin presented a paper titled “Regulatory Status of Maillard Reaction Flavors.” Lin told us that reaction flavors, by virtue of their processing, contain processed free glutamic acid (MSG).<sup>E</sup> He also told us they contain carcinogenic heterocyclic amines.<sup>54,55</sup>

Not long after that, we became aware that acid hydrolyzed proteins contain cancer-causing propanols as well as MSG.<sup>56,57,58,59</sup> The FDA has known, since 1990 if not before, that acid hydrolyzed proteins contain cancer-causing propanols,<sup>60</sup> but aside from suggesting that the levels of carcinogens in acid hydrolyzed proteins in the food supply be cut down, the FDA has done nothing to limit consumers’ exposure to those carcinogens.

The FDA has done nothing to ***require*** that the glutamate industry or anyone else cut down on the levels of carcinogens in either reaction flavors or acid hydrolyzed proteins added to food. It’s also done nothing to ***warn*** consumers about the presence of carcinogenic reaction flavors or carcinogenic acid hydrolyzed proteins in food.

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E - Reaction flavors, also known as process flavors, have traditionally been produced by heating a protein source with a sugar source to produce a mixture of chemicals containing flavor value.

## ***Washington, DC***

Our country's capital is an interesting place for MSG-sensitive people. When forced to eat outside of my own home, and unable to carry something to eat with me, I chose to eat in high-end restaurants, believing it would be easier for them to produce meals without using processed food. I found that in Washington, DC, the restaurants that catered to legislators used little, if any, MSG.

## ***But Life Goes on Until it's Over***

On June 15, Adrienne wrote to Dr. Olney:

*"Jack continues to deteriorate, suffering obvious mood swings fairly soon after ingesting any small amount of free glutamate, and bleeding rectally (as in hemorrhoids) 12 or more hours later. Even things like milk solids, or the carrageenan most manufacturers have started to put in heavy (whipping) cream, bother him now."*

I was deteriorating. As careful as I tried to be, I still got into MSG and suffered miserably. Only at home could we restrict meals to fresh fruits and vegetables, and good quality fish, meat and poultry, and I wouldn't have reactions.

Problems or not, we continued to travel, but each year became more difficult. My sensitivity to MSG was clearly growing. Increased amounts of MSG were being poured into food—without disclosure, the food industry had developed a "clean label" program for hiding MSG, and more processed foods were being used throughout the world; but not as much MSG was being used in Europe or Asia as in the U.S.

## ***More about Industry's FDA***

The FDA was operating as it always had on behalf of the glutamate industry. In July 1992, the FASEB report, *Safety of Amino Acids Used in Dietary Supplements*, was published.<sup>61</sup> We knew that on page 166, we'd find the words:

*"...it is prudent to avoid the use of dietary supplements of L-glutamic acid by pregnant women, infants, and children...[and] by women of childbearing age and individuals with affective disorders."*

but we saw nothing in the press about the toxic potential of MSG.

Sometime in 1992, the FDA appointed both IGTC chairman Ebert and IGTC spokesperson Kristin McNutt **as consumers** to the FDA Food Advisory Committee.<sup>62,63</sup> Were we frustrated? Yes. Discouraged? Sometimes. Relentless? Always.

Having come to the conclusion that the glutamate industry was defrauding the public with full knowledge and approval of the FDA, we asked the FDA/HHS Office of the Inspector General (OIG) to investigate our charge that the behavior of the FDA was inappropriate.<sup>64</sup> In turn, the OIG turned the investigation over to the Office of Research Integrity (ORI),<sup>65</sup> thereby guaranteeing that our petition would be killed. The ORI oversees and directs many Public Health Service research integrity activities on behalf of the Secretary of Health and Human Services, but does not oversee regulatory research integrity activities of the FDA.<sup>66</sup> Therefore, under no circumstances would the ORI have jurisdiction in this matter.

As often happened, there was an upside to the contacts Adrienne had made. When she called the ORI as directed, she had the good luck of speaking to Dr. Richard Broadwell, a neuroscientist who'd taken the job at the ORI for personal reasons. Although he could do nothing for us as an ORI staff member, he was generous in sharing information related to neuroscience, and Adrienne learned a great deal from him.

## 1993

### ***Still More about Industry's FDA***

In many ways, 1992 simply ran into 1993, but in fundamental ways, 1993 was different. In 1993, FASEB was shaping its study on the safety of MSG in food. The study was commissioned and designed by the FDA, given to FASEB (an organization that had minimal standards for controlling conflicts of interest of Expert Panel members) to execute, and billed as an "independent study."<sup>67</sup> During most of 1993, commenting on and monitoring the activities of FASEB and its Expert Panel occupied us. As part of the aforementioned study/review of the safety of monosodium glutamate and related glutamates, a public meeting was scheduled for April 7, 1993. The meeting was advertised as a public forum for submission of scientific data on the safety of MSG.

In February 1993, prior to taking testimony at the public hearing, FASEB published a preliminary report called the Tentative Report.<sup>68</sup> I thought the publication of a preliminary report prior to the public hearing was a pretty clear indication of how meaningless the public's testimony to FASEB would be. I suspect if a public hearing for this investigation hadn't been required, it would never have occurred.

Thinking back to the Tentative Report and the April open hearing, looking at my notes and then thinking of the contract between the FDA and FASEB, I sometimes wonder why I bothered to participate. The whole thing was a dog and pony show from the start, set up to vindicate the use of MSG. The Expert Panel (rife with conflicts of interest) would evaluate "scientific data" that would have been provided by the IGTC; ignore the testimony of those who criticized the studies from which that badly flawed "scientific data" came; and entirely discount the testimony of MSG-sensitive people because they hadn't subjected themselves to double-blind studies to validate their reports of MSG sensitivity. The design of the study, which consisted of 18 questions to be answered by the Expert Panel, was such that under no circumstances would the flavor enhancer called monosodium glutamate be judged to be toxic.<sup>69</sup> Take Question 13, for example:

*"Are there any studies conducted [with live subjects] during the 1980's or 1990's that provide additional insight concerning the capacity of orally administered MSG to mediate acute damage (lesions) of the arcuate nucleus of the anterior hypothalamus or of other circumventricular structures in the CNS of nonhuman primates?"*

The answer?

*"No. The Expert Panel was unaware of any studies performed within the last 15 years that have directly addressed the ability of orally ingested MSG to produce lesions in nonhuman primates."*

The whole answer...

*Studies demonstrating that orally ingested MSG produced lesions in laboratory animals had been so well documented in the 1970s, that researchers had no need to replicate those studies in the 1980s and 1990s, and wouldn't have wasted their time or the lives of laboratory animals doing so.<sup>70</sup> Moreover, had such studies been undertaken, mice, not the more expensive primates, would have been their subjects, for it had previously been demonstrated that mice, better than non-human primates, represent the human condition.<sup>71</sup>*

What about the issue of conflicts of interest? The FDA had rules to prohibit them, but they hired FASEB to do the study of the safety of MSG, and FASEB had impotent rules for dealing with conflicts of interest. It occurred to me that its lax standards for conflicts of interest were likely a major reason the FDA used FASEB so often.

There was no end to the deception that began with the FDA's announcement of the study. There was ample opportunity for us to comment on the chicanery, and we commented each and every time we saw an opportunity to do so. On March 26, 1993, for example, Adrienne wrote to Kenneth D. Fisher, Ph.D., Director, Life Sciences Research Office FASEB.

*“The Tentative Report arrived last week, and I still cannot find the words to adequately express how disappointed I was when I read it. FASEB did not address the question of risk. In fact, FASEB focused on subjects that would obscure the issue.”*

The response was as it always would be—phrases like, “this is just one piece of the study,” or “there will be others added to the panel of experts.”

We still quote from Dr. Richard Henneberry's April 7 testimony to FASEB:

*“I consider it ironic, that the pharmaceutical industry is investing vast resources in the development of glutamate receptor blockers to protect [central nervous system] neurons against glutamate neurotoxicity in common neurological disorders, while at the same time the food industry, with the blessing of the FDA, continues to add great quantities of glutamate to the food supply.”<sup>72</sup>*

I feel bad that so many good people traveled to Washington to testify before FASEB, believing their input would have value. Neither they, nor I, realized at the time that there was no chance the final report would even suggest that use of MSG should be meaningfully regulated.

Some people still believe the FDA is charged with safeguarding the health or the nation, but it's my experience that as early as 1990, the FDA was serving as guardian of big business. Not just **business**. **Big** business.

Before we set out for Washington in April, we'd determined that we'd spend a month there, testifying before the three members of the Expert Panel who'd been assigned to listen to testimony in the public hearing, attending the balance of the FASEB meeting, and visiting Congress. We

rented an apartment at Highland House in Chevy Chase, Maryland, close to the metro line, and rented furniture to go in it.

We were still in Washington in May. After Adrienne found Ebert's statement about the use of aspartame in placebos, we'd extended our stay. She wrote to Beatrice Trum Hunter:

*"We have been wonderfully busy here in DC.*

*"We have spent a good deal of time at the FDA Dockets, reading everything that was submitted to FASEB for the present study.*

*"We have drawn heavily from those materials in preparing materials to document the hazards caused by MSG. We have started carrying that documentation to meetings with Senators, Representatives, and their staffs. So far everyone has been incredibly receptive."*

Again, as always, I was hopeful. In the end, however, the incredibly receptive legislators belonged to the wrong party, weren't on the right committee to get anything done with regard to labeling, or were simply overwhelmed at the time with other issues. They'd pass our information on to an MSG-sensitive family member, but would do nothing for their constituents—unless, of course, those constituents had a stake in the glutamate industry. Or so it seemed to us.

## ***Israel***

In November, we traveled to Israel with a group from the Chicago chapter of the Weizmann Institute of Science. A number of extremely interesting peer-reviewed studies had been done by Frieder and Grimm of this respected scientific institute.<sup>73,74</sup> They demonstrated that prenatal exposure of pregnant rats to MSG in their drinking water resulted in long-lasting changes in general activity level and in the performance of complex discrimination tasks, and resulted in long-term neurochemical modifications in the brains of their offspring. We'd learned that MSG ingested by the mother can pass through the placenta to the fetus in utero and affect learning.

It was a thrill and delight to be in the company of honest and talented scientists. It was also thrilling to travel throughout the marvelous country of Israel, recreating the ancient and experiencing the new.

In my excitement, I forgot my limitations. We were in an area populated by Hasidic Jews in Jerusalem when I spied a coffee cake in a shop window that was the spitting image of the wonderful cake my mother used to make. For years, I'd looked for my mother's recipe and/or a bakery that produced a similarly wonderful coffee cake, and in Jerusalem I'd found it. I bought two, consuming one cake immediately and the second one as soon as we got back to the hotel.

I was in Jerusalem, in a Hasidic neighborhood, and hadn't thought to ask if margarine had been used in the coffee cake. Bakery goods made for people who keep kosher will very likely be made with margarine rather than butter, and margarine will almost invariably contain MSG. I don't know if it was the margarine, but something in the coffee cake contained MSG, and I became exhausted beyond belief and fell into a really nasty foul mood. It was normal for me to suffer extreme fatigue and mood change after ingesting MSG. Overeating doesn't bring on MSG reactions.

### ***Industry's Researchers, Industry's Journals***

In December 1993, a typical glutamate industry-sponsored study done for the IGTC in Australia by Tarasoff and Kelly was published in *Food and Chemical Toxicology*.<sup>75</sup> At the time Tarasoff and Kelly were faculty in the Department of Chemistry, Faculty of Business & Technology, University of Western Sydney, Campbelltown, NSW, Australia. It crossed my mind when I read their research report that it was quite a stretch to have faculty from the Chemistry Department in the Department of Business and Technology doing research on MSG. I was further interested to see that the IGTC had gone to Australia for its researchers.

There was nothing special about that study itself. True to form, the subjects claimed to be MSG-sensitive but might not have been so. Researchers counted only a few of the many MSG reactions as such for purposes of the study; they counted them only if they occurred within two hours following testing, even though reactions are known to occur as much as 48 hours after ingestion. And, the placebos were laced with aspartame.

Predictably, Adrienne wrote a lengthy letter to the editor of *Food and Chemical Toxicology* detailing the flaws in the Tarasoff and Kelly study—a letter submitted for publication.<sup>76</sup> On April 6, 1994, Managing Editor Tuan Ho wrote Adrienne that her Letter to the Editor would be published,

but on June 1, 1994, Editor in Chief J.F. Borzelleca, from the faculty of the Medical College of Virginia where Dr. Donald Kirby was conducting studies for the IGTC,<sup>77</sup> wrote to Adrienne that “after reconsideration we cannot accept your comments on the paper by Tarasoff and Kelly for publication... Our concern is that your critique could be wrongly exploited by different groups of people involved in the MSG issue...”<sup>78</sup>

What made the Tarasoff and Kelly study so very special was the fact that acceptance of Adrienne’s letter to the editor was followed two months later by rejection.

When Adrienne protested the decision not to publish her letter, Borzelleca personally told her there was no hurry, because the September 1994 FASEB report was being returned to FASEB by the FDA. Borzelleca said he’d seen a copy of the report and knew of discussion between the FDA and glutamate industry about it. Thus it was that Adrienne learned that the report of the “independent study” done for the FDA by FASEB had been given to the glutamate industry for review, and, because it hadn’t been found satisfactory, it was going to be redone.

## 1994

In 1994, Adrienne joined the American Medical Writers’ Association (AMWA). A good friend on the AMWA governing board had convinced her to join, and she remained a member through 2001. By and large, AMWA members worked for pharmaceutical companies, producing reports of clinical trials, promotional material, or information about the benefits of pharmaceuticals, and Adrienne was uncomfortable chit chatting with people who were proud of the pharmaceutical companies they worked for, and blind to any flaws in their research.

On July 15, 16, and 17, 1994, the NOMSG consumer group held its annual meeting at the Chicago Marriott downtown hotel. One of our presenters was Dr. Russell Blaylock, who’d recently published the book, *Excitotoxins: The Taste that Kills*, which included a well-researched description of what excitotoxins are, where they’re found, and how they react in the body.<sup>45</sup> The excitotoxins in which we were personally interested were the glutamic acid in MSG and the aspartic acid in aspartame.

The meeting was well advertised, given that the major newspapers were reluctant to give us coverage. We arranged for participants to earn



continuing education credits, which possibly encouraged a few people not sensitive to MSG to attend.

One person who didn't attend was The Glutamate Association's executive director, Richard Cristol. Someone claiming to be from his office had called earlier in the week and asked if he could attend, but he never materialized. Another no-show was an alleged college student who gave such great detail about his academic standing that we felt compelled to look him up at the school he claimed to be attending. The school knew nothing of this student.

The Marriott provided all the food and drink served at the conference. I'd worked with them, and they with me, to make certain there was nothing served that would cause an MSG-sensitive person to have a reaction. When people began reporting they were having MSG reactions following the conference banquet (one of those people being myself), it was clear there'd been a problem in the kitchen. When we inquired, we were told that contrary to the standard procedure of keeping at least one meal served at a banquet, all the food we'd been served that night had been destroyed.

Adrienne had been working long and hard with the Marriott people in Washington to convince them to work with us, possibly even sponsoring research on MSG toxicity. Certainly the presence of MSG in food we'd explicitly asked to be free of MSG posed a serious problem, but one we felt could be resolved by working with Marriott management. However, NOMSG's president, Kathleen Schwartz, evidently felt otherwise, for following the questionable dinner, Kathleen became confrontational. Adrienne and I begged her to work *with* the Marriott people, not against them, to find out how the food had been treated with MSG. Instead, Kathleen threatened to call the police and the newspapers, and sue the Marriott Corporation. She ended up doing none of that, but any chance we had for future cooperation with Marriott vanished.

There was another feature of that meeting I found interesting. I'd contacted the Chicago media and visited some of the local newspapers to encourage them to attend, but only Steve Pratt, food editor of the *Chicago Tribune*, was there.

As he was leaving after the first day, I spoke to Pratt and told him I hoped he'd enjoyed the presentations. He responded that he was so impressed with the topic and presenters that he'd already rearranged his schedule and would be

returning for the second day. He assured me there'd be an article on MSG and our meeting in the food section of the *Tribune* the following Thursday.

On Thursday, there was indeed a sizeable article in the *Tribune's* food section.<sup>79</sup> To my dismay, however, it contained a short paragraph announcing the fact that there'd been a meeting of NOMSG, and Dr. Blaylock had made a presentation in which he described the dangers of MSG. The article then jumped to the fact that Pratt had spoken to Dr. John D. Fernstrom to discuss the subject of MSG, and continued with the sort of misinformation we'd grown to refer to as glutamate industry propaganda.

I was furious. Dr. Fernstrom had represented the interests of the glutamate industry for many years. I called Pratt and asked him to explain what was going on. He was polite, but refused to do any sort of correction or retraction. He also wouldn't consider doing another story about MSG.

Not long afterwards, Pratt retired. Some two years later, I received a letter in which he apologized for the article he'd written, advising me that as an employee of the newspaper, he was sometimes told the direction a given article should take. He commented that he was sure I was doing the right thing, and ended by saying I should keep up the good work.

I am reminded that I had discussion with the *Chicago Tribune* after release of the "60 Minutes" program about MSG. I'd received what we call the "war plan" of the glutamate industry, designed to kill the program or do crisis management. That document suggested that individuals who had good relationships with reporters should contact them and ask for assurance that articles would appear indicating that MSG is safe; that the MSG segment was nothing more than another Alar-scare staged by "60 Minutes." Sure enough, following the broadcast, the *Chicago Tribune* published an article indicating that the content of the "60 Minutes" segment was inaccurate, and MSG was safe.<sup>80</sup> It had all of the earmarks of a piece written directly by The Glutamate Association, the IGTC, or IFIC.

With the exception of a single article published in 2008,<sup>81</sup> the *Chicago Tribune* has never published anything that might indicate MSG is toxic.

The owners of the *Chicago Tribune* also owned a major radio outlet, WGN. I was contacted by WGN radio personality Kathy of the Kathy and Judy show, who suffered from MSG-induced migraine headaches. She invited me to be interviewed on the show and take calls.

An initial visit turned into three segments on MSG. At one time, Kathy interviewed Delores Nick, a woman sensitive to MSG who'd appeared on the "60 Minutes" program. Subsequently, Kathy told her listeners that in all her years in media, she'd never received as many contacts from listeners as she received while they were doing the segments about MSG. Off the air, she asked that I keep her informed about the MSG issue, and contact her when something important came up.

Sometime later, I tried to contact Kathy's producer to tell him about something I thought would be of interest to her. Only through my persistence was I finally connected to him, and then only to hear him say that in all honesty, I was wasting my time because they'd been directed by management to never again discuss the subject of MSG.

The FDA continued doing its thing. In a letter to Bruce Ingersol of the *Wall Street Journal*, I wrote:

*"I apologize for the delay in getting the enclosed resume of Michael Taylor to you. It is interesting that the FDA approved BST for cows and bioengineered foods during his tenure as Deputy Commissioner. We cannot help but wonder if Taylor is the person, or one of the persons, who kept the FDA from investigating the scientific misconduct we uncovered in which the International Glutamate Technical Committee used aspartame since 1978 as a placebo in double blind studies designed to prove that MSG is safe. As you know, aspartame is a Monsanto product.*

*"It is my understanding that Taylor is a cousin or second cousin of Tipper Gore."*

(Michael Taylor came from Monsanto to work for President Bill Clinton and Vice President Al Gore. Tipper Gore was, at that time, Al Gore's wife.)

In August 1994, we returned to Washington. During that trip, we visited the offices of Senators Mikulski, Moseley-Braun, Simon, Wellstone, and others. On Thursday, August 18, I visited with Dr. Fred Shank at the FDA. On August 24, Adrienne and I visited Don Grim at Marriott headquarters. The fences that had been broken in July at the NOMSG convention couldn't be mended.

One of our alternative medicine friends had told us of a developer, Burton Goldberg, who had amassed a considerable sum of money, and

decided to use his wealth teaching others all he knew about alternative medicine. Earlier in the year, Goldberg, who had published what he called the ultimate book on alternative medicine,<sup>82</sup> joined us at our home for dinner. He believed my MSG problem could be resolved, and suggested I visit Lita Lee, an expert on the use of enzymes.

I'd been introduced to alternative medicine years ago when a homeopathic physician diagnosed and remedied a condition suffered by one of our children. Allopathic physicians had failed to treat her condition effectively, and I was open to Goldberg's suggestion. Moreover, Lee believed taking the enzymes she recommended would help me.

Recognizing my extreme sensitivity, Lee gave me only enough enzymes to use for a couple of weeks to see what their effect might be. However, after three or four days, I began to manifest symptoms of MSG toxicity: inability to find the right words when I spoke, loss of balance, disorientation, and a general feeling of being ill. As my symptoms seemed to get worse each day I called Lee, and we agreed I should stop taking the enzymes. She apologized that she wasn't able to help me.

Shortly thereafter, I ran into a detail man for a specialty supplement company who understood my reaction to the enzymes. He knew that supplements his company sold were derived from vegetables, and those who manufactured enzymes wouldn't go to the expense of removing all protein before processing. The remaining protein would, therefore, be broken down during production, resulting in the production of free glutamic acid, i.e., MSG.

In October 1994 Adrienne, George Bucic, and I incorporated the Truth in Labeling Campaign as an Illinois not-for-profit corporation. Kathleen Schwartz of NOMSG was reluctant to have her consumer group participate in the lawsuit Adrienne and I were considering, and we decided that to help us move forward in whatever direction we chose to move, we should establish this new organization without membership so as not to compete with NOMSG.

Toward the end of the year, I took a call from a man who introduced himself as Patrick Dilling, a lawyer who claimed to be sensitive to MSG. Dilling wanted to "sue the sons of bitches" over their failure to protect consumers. He called us to secure assistance—and generate cash to pay his legal fees and out-of-pocket expenses.

Dilling sued the FDA in the U.S. District Court in St. Louis, in part because St. Louis would be a convenient location for Olney, who'd gladly consented to be one of our plaintiffs. Unfortunately, we didn't take into account the fact that Monsanto, the company that owned aspartame at the time, "lived" there, too.

On December 13, 1994, prior to suing, and as required by law, a Citizen Petition that Adrienne and I wrote was filed with the U.S. Department of Health and Human Services, FDA, asking the FDA to require labeling of all MSG found in processed foods.

I can think of nothing more important to the glutamate industry than preventing identification of MSG wherever and whenever it is used in processed food. After all, if identified, consumers might be able to determine if products containing MSG were causing adverse reactions. It seems to me that in actuality, the fight against identifying MSG in processed foods is tantamount to admission of MSG's toxicity. Think about it. If MSG wasn't harmful, it wouldn't be hidden.

Preparation for suing the FDA was no small matter. There were the lawyers to educate, plaintiffs to convince to participate, and press releases to send out on the day the suit was filed. There was also co-counsel to be identified in St. Louis, because Dilling was not licensed to practice law in Missouri. That job fell to us, too.

At the end of 1994 we were still learning. We knew I'd get sick following ingestion of MSG, but not from the glutamate in unadulterated protein, but we didn't know why. We found our lack of knowledge in this area particularly distressing because the glutes were getting mileage out of claiming that no one could possibly react to MSG without also reacting to tomatoes and mushrooms, because tomatoes and mushrooms were loaded with glutamate.

## 1995

It was in 1995 that we learned that the free glutamic acid in the unadulterated tomato **is chemically different** than the free glutamic acid that occurs in food as a consequence of a manufacturing process.<sup>83</sup> The initial revelation had come from reading a study done in 1994 by Rundlett and Armstrong of the Department of Chemistry at the University of Missouri, Rolla: "Evaluation of free D-glutamate in processed foods." According to the study abstract:

*“Monosodium glutamate (MSG) is added to many processed foods at significant levels for flavor enhancement. It is also naturally occurring at high levels in some foods. The enantiomeric composition of free glutamate in foods was examined and all processed foods analyzed were found to contain D-glutamate.”<sup>12</sup>*

It had taken us more than five years to see what had just become obvious. There is no processed (manufactured) free glutamic acid without impurities.

There are basically three different grades of raw materials used in products. They are:

Pharmaceutical Grade—meets pharmaceutical standards

Food Grade—meets standards set for human consumption

Feed Grade—meets standards set for animal consumption

The difference between each grade type is one of quality and purity. In technical terms, no substance is 100% pure.<sup>84</sup> There will always be unwanted byproducts of production, and there may be substances added to products. The difference between the grades is one of how much of these other substances, these impurities, are present in the product. No free glutamic acid can be produced without simultaneously producing impurities.

The Food Chemical Codex (FCC) is a compendium of internationally recognized standards for the purity and identity of food ingredients, including food-grade chemicals, processing aids, foods (such as vegetable oils, fructose, whey, and amino acids), flavoring agents, vitamins, and functional food ingredients (such as lycopene, olestra, and short chain fructooligosaccharides).<sup>85</sup>

On the subject of monosodium glutamate, Yoshi-hisa Sugita, CEO of the IGTC in 1994, wrote,

*“Specifications of MSG ‘not less than 99.0%’ means that the 99.0% is the minimum content guaranteed to the user. The actual purity of MSG is around 99.8%, with a small amount of moisture (water lost on drying), and negligible amounts of calcium, organic acids and amino acids.”<sup>86</sup>*

The food, dietary supplements, and pharmaceuticals that contain manufactured glutamate (glutamate plus impurities) cause brain

lesions, endocrine disorders and adverse reactions in an undetermined portion of the population. When Olney and others found brain lesions and endocrine disorders in laboratory animals,<sup>87</sup> they were using monosodium glutamate purchased in grocery stores in place of what would have been more expensive pharmaceutical-grade glutamic acid<sup>88</sup> (which would also have contained impurities).

Adrienne called Dr. Armstrong and found he was receptive to the idea of doing research for us. He asked only that we cover the expenses of the laboratory assistant(s) who'd be working on the study. We hesitated to give him the go-ahead for what would be a \$15,000 personal obligation, and when we called a few days later to accept his research offer, Dr. Armstrong would no longer take Adrienne's calls.

This was the second time an agreement to do research, reached over the phone, had run amuck. The first incident happened in 1993, when researchers in the sleep clinic at Baylor College of Medicine agreed to study the possible effects of MSG on disruptive sleep. Max Hirshkowitz, Ph.D. and Nilgun Gokcebay, M.D. were working with Adrienne to design the sleep study when, without notice, they stopped calling her, and stopped taking her calls. So it was with particular interest that we later noted that in 1998, the International Symposium on Glutamate, held in Bergamo, Italy, was sponsored jointly by the Baylor College of Medicine, the Center for Nutrition at the University of Pittsburgh School of Medicine, the Monell Chemical Senses Center, the International Union of Food Science and Technology, and the Center for Human Nutrition. Financial support was provided by the IGTC.<sup>89</sup>

In 1995, consumers had more to contend with than deceptive and misleading labeling and the fact that the FDA was beholden to industry. In response to consumers' inquiries, food companies were lying about the presence of MSG in their products. In one of my articles, I wrote:

*"MSG sensitive people tell numerous stories of being given false and misleading information about MSG by food companies, and of being treated poorly when they attempt to discuss the MSG issue. Certain food companies apparently believe that it is part of their job to keep consumers from knowing what they are eating. Ajinomoto, the world's leading producer of MSG, has run advertisements in food industry magazines suggesting to food producers that 'disodium inosinate,' a product that works synergistically with MSG, 'can be added in products already containing artificial flavor without changing the label.'"*

Most MSG-sensitive individuals who've inquired of food companies about MSG content in products have been told more than once that if they were MSG sensitive, they wouldn't be able to tolerate tomatoes because unadulterated tomatoes contain free glutamic acid just like MSG does. The food companies never mention the impurities that accompany processed free glutamic acid (MSG).

On August 29, 1995, the Truth in Labeling Campaign (TLC) and 29 independent citizens filed suit in federal court in St. Louis (*Truth in Labeling vs. Shalala*),<sup>90</sup> asking the court to intercede on their behalf and require that all MSG in processed foods be labeled. On March 30, 1998, Magistrate Thomas C. Mummert, III dismissed the case.

As plaintiffs, we had to prove the FDA had been “arbitrary and capricious” in its refusal to require that all MSG in processed food be identified on the labels of the products that contained it. Proof of the FDA being arbitrary and capricious lay in the files of the FDA. We knew what it was and we knew where it was, but the FDA refused to release that material to the court when it was requested under discovery. We explained to Magistrate Mummert that in presenting the court with several boxes of irrelevant files in place of the documents requested, the FDA had selectively omitted relevant files and correspondence from the period being reviewed. When challenged, the FDA replied that it had gone through its files and had only sent those that were relevant. The FDA didn't provide the court with a copy of the 1994 FASEB report that had been returned by the FDA to FASEB at the suggestion of Ajinomoto or the IGTC, or copies of information/studies sent to the FDA by Dr. Olney. Magistrate Mummert raised no objection, and our case was over.

The court's decision said nothing about the safety or toxicity of monosodium glutamate or other MSG-containing ingredients.

Did someone get to Magistrate Mummert? Was the fact that Monsanto had a presence in St. Louis, or the fact that Ajinomoto might have supplied the aspartic acid and phenylalanine ingredients for Monsanto's aspartame have anything to do with it? Ajinomoto did manufacture both those amino acids. Might the fact that Ajinomoto was involved in two joint ventures with Monsanto in the sweetener business in Europe have anything to do with it? Interesting questions, but we're still waiting for our whistleblower to come forward with the answers.



In 1985, Monsanto had purchased G.D. Searle, inventor and producer of aspartame, and the aspartame business became a separate Monsanto subsidiary: the NutraSweet Company.<sup>91</sup> Ajinomoto acquired its aspartame business from Monsanto in 2000.<sup>92</sup>

It was 1995 and the glutes were still at it. They seem to have developed a manual for what some people might call deceptive practices. In 1995, it was an attempt to discredit me.

On August 30, I called Dr. Roland Auer, pro-MSG advocate and former member of the FASEB Expert Panel, spending more than an hour on the phone with him, discussing the safety of monosodium glutamate, an issue on which we disagreed. Auer had been appointed to the FASEB Expert Panel as a neuroscientist, possibly to placate Olney, who'd repeatedly commented that in all the FDA's deliberations, no neuroscientist had participated in the FDA's "independent" reviews of MSG safety.<sup>93</sup> As an Expert Panel member, Auer was among those who had found for FASEB that MSG was safe. After the July 1995 FASEB report was published, we'd been interviewed together by Eugenia Halsey for CNN, Auer representing the point of view of the glutamate industry, while I represented people who believed MSG was toxic. Not considering that he might be under the spell of the glutamate people, I called to provide him with information I believed he'd overlooked.

I thought our conversation had been a simple discussion of an issue on which two people disagreed. I'd shared my ideas freely, without thought that what I said might be misquoted. I'd not yet learned all there was to learn about the way the glutamate industry operated.

A few days after our conversation, I received a seven-page letter from Auer. It was a gross misrepresentation of what I'd said to him. In essence, he'd taken my comments out of context and sent copies of his letter to people who might be interested in discrediting me. I'd seen this tactic used by the glutes previously, and I would see it again: write something destructive about your target, which later the glutes will quote from as though the distortions of the writer were fact.

Periodically, I received a phone call or letter from someone who's clearly an agent of Ajinomoto or the IGTC. Sometimes the contacts come from students "writing a paper" and looking for information, often from students not registered at the colleges they claim to be attending. Some

come with criticism of our lawsuit or our website, spewing out invectives for no apparent reason—wasting my time, possibly attempting to upset me.

To me, Auer was just a different version of the same thing. His spin seemed to be to repeat some of what I said to him, out of context, cast in a form that could later be used by the glutes to discredit me. The glutes seem to have a special talent for doing such things. They really are good at what they do.

Drs. Ronald Simon and Donald Stevenson were also part of the 1995 phenomenon. On the day before the August 31, 1995 FASEB report to the FDA was released to the public, they wrote to inform the FDA that they believed the FASEB report had made a grave error in stating that MSG was known to be an asthma trigger.<sup>94</sup> They didn't mention the fact that in 1995, they were doing research for the IGTC.

In 1995, Adrienne and I were splitting time between San Diego and Chicago, with trips to Washington on occasion. To the best of our knowledge, our phones were still bugged, our fax machines suffered intercepted transmissions, at least from time to time, and we knew better than to say anything that might prove useful to the glutes either at home or in the car. We laughed about our secrets being secret. There wasn't a whole lot more to laugh about.

We ate out only on rare occasion, as I'd become acutely sensitive to the smallest amounts of MSG, and not all MSG in processed food was labeled. Friends didn't invite us for dinner, because they knew I wouldn't eat, and they didn't like to come to our house for dinner because they knew they couldn't reciprocate. When we went to our children's homes, I brought my own food or did all the shopping and cooking. When we traveled in the U.S., we had an electric hot plate and portable electric cooler with us, and timed our travel to stay at Residence Inns that offered rooms with kitchens. If a restaurant meal couldn't be avoided, I ordered a steak with no seasoning made in a pan cleaned before the cooking began.

When we traveled in Europe—and I'm talking of some years ago—I rarely had a problem. I ate fresh fruits and vegetables and unadulterated fish, meat, and poultry; soup made from scratch without benefit of bouillon cubes and flavor enhancers; and cheese and ice cream made from whole milk that hadn't been ultra-pasteurized.

In 1995, we began holding public NOMSG meetings in the Chicago area, originally in our home, and later at Lutheran General Hospital. There were a few MSG-sensitive people who came regularly. Others came for basic information, but once they knew where MSG was hidden, they came no more.

Toward the end of the year, the pace of MSG-related activities slowed considerably. FASEB had turned in a report to the IGTC's liking.<sup>95</sup> Magistrate Mummer would refuse to order that the FDA provide all relevant material we'd asked for under discovery, so even before the verdict was in, we knew we'd lost the case against the FDA. Celebrities like Dean Edell and Julia Child had been, or were going to be, recruited by the IGTC or The Glutamate Association to speak positively about the glories of monosodium glutamate. And the clean label industry was booming.

## **1996**

At 8:30 a.m. on October 17, 1996, I reported to Stanford University Hospital for prostate cancer treatment. I was involved in what I thought to be routine intake procedures when a "crash cart" appeared with staff in tow, and I was taken to the cardiac care unit and hooked up to a cardiac monitor.

"What are you doing?" I asked the nurse. "I'm here for prostate cancer treatment."

"No confusion," said the nurse, "but we have to evaluate the seriousness of your atrial fibrillation before we proceed."

I had no idea I was fibrillating, but once I accepted that I was, it wasn't hard to figure out where it had come from. I'd recently brought my high blood pressure under control using a pharmaceutical called procordia, and one of its possible side effects was atrial fibrillation.<sup>96</sup> Once compromised by a susceptibility to atrial fibrillation, I'd now fibrillate each time I ingested MSG.

In the past, I'd suffered from fatigue and mood changes when ingesting MSG, and had gone into anaphylactic shock when ingesting MSG with alcohol. My cardiologist didn't think fibrillating was a step up from going into anaphylactic shock. He suggested I'd likely die from the stress placed on my heart by repeated atrial fibrillation—if a particular attack

in and of itself didn't kill me. Since increased risk for cardiac arrest and stroke are side effects of fibrillation, I didn't think fibrillation was a step in the right direction, either. It ordinarily took alcohol in combination with MSG to bring on anaphylactic shock. Atrial fibrillation came on after ingesting MSG without the help of alcohol.

We spent three months at Stanford. I'd go to the hospital in the morning, return home and, at Adrienne's insistence, take a nap—whether I was tired or not. (I've never had difficulty sleeping.) Afternoons and weekends were spent doing the things that tourists might routinely do: shopping, touring, and going to the opera in San Francisco. Our afternoons also included shopping for and making dinner.

## 1997

On May 19, 1997, a young alternative medicine practitioner practicing in Chicago came to one of the NOMSG meetings to tell us about a procedure he thought might be of value to MSG-sensitive people. The procedure had been created by Dr. Devi Nambudripad, who'd come from India as a nurse, and gone on to become an acupuncturist and chiropractor. She called her procedure Nambudripad's Allergy Elimination Technique (NAET).<sup>97, 98</sup> Among other things, it involved the use of muscle strength testing, which you might recognize as applied kinesiology.

The demonstration was poorly presented. The presenter was difficult to follow. No one at our small meeting saw anything of value. It was only years later that I learned we were wrong.

In June 1997, Adrienne and I attended the Institute for Food Technologist (IFT) annual meeting in Orlando. Adrienne had joined the IFT in 1993 after attending one of its meetings in Chicago. The idea for joining had come from Ellen Metzger, who'd been in Chicago at the time. Like so many of us, Ellen was MSG-sensitive and interested in raising the public's awareness of the adverse effects MSG could have on health and well-being. Ellen had all kinds of good ideas.

In addition to dropping in to presentations that interested us, we joined a luncheon session at which the FDA's Dr. Shank was speaking, and a dinner hosted by *Food Chemical News*. Most of our time, however, was spent on the exhibition floor, for we knew we still had much to learn. It was there that Adrienne approached a youngish looking fellow standing

in the booth of an analytical testing laboratory and asked him if his company would analyze MSG for her.

“Absolutely” he responded. “What kind of results would you like us to give you?” With further discussion, it became clear that through setting up limits in their testing procedures and defining “MSG” as we desired, they’d be able to say anything about our MSG sample we wanted them to say. They’d do that for us—which suggested that industry figures for amounts of MSG in ingredients and/or products might be meaningless.

The next time we passed through Colorado, we made it our business to visit the Colorado Historical Society and journey up to Greeley. In 1993, Russell Phares had written to FASEB to inquire if they might have some information concerning “MSG poisoning” that, he said, had been the fate of workers in the Great Western Sugar factory producing monosodium glutamate. We found his letter in the FDA docket pertaining to the FASEB study, and wrote to him.

Eventually, we met Phares, who told us he’d once worked at a monosodium glutamate production plant in Greeley, Colorado, cleaning the vats in which monosodium glutamate was made. He said that eventually both he and a friend who’d worked with him began having medical problems. For Phares, it was years of an uncontrollable skin condition and other problems he wasn’t comfortable talking about. He’d become homeless, but had eventually been taken in by a religious organization, where some of his difficulties were resolved. Being extremely handy, Phares lived at the religious center working as a handyman. He told us his friend was living on the streets.

We started at the public library in Greeley, but found little of interest outside of the librarian. She knew nothing of a monosodium glutamate plant, but was happy to share all she knew about Great Western Sugar, and she searched her files for us. The old-timers were all gone, she told us, and she couldn’t think of anyone to suggest we talk to.

From what we could gather from the few records we could find, the monosodium glutamate plant had been closed ahead of the closing of the Great Western Sugar plant itself, which would have taken place some years later. One report said the monosodium glutamate plant had been converted to production of a different chemical. Another said it had been bulldozed, records and all, and the rubble carried away. The

second option is much more dramatic, the stuff that mystery novels are made of. What actually happened? We don't know.

In December 1997, we visited Paris for the second time, not having been there since 1984, before I'd realized I was sensitive to MSG. My MSG reactions had been increasing in number and severity, leaving me to recover over a period of time while I continued to fibrillate and just didn't feel well. So Adrienne made sure we'd be in a location where she could go walking if she had to go walking alone, and we'd be in a place where English was spoken, in case I needed medical attention.

We had scheduled dinners for every other evening: Apicius on Tuesday, Le Bourdonnais on Thursday, Le Duc on Saturday, and Arpege on Monday—restaurants run by talented chefs who used whole fresh food and had no need for MSG. We wandered the streets, going to new places and seeing new things without ignoring our favorite outdoor food markets, the Rodin Museum, and the Musée d'Orsay. With Christmas in the air, we sought out the Marché de Noël de Paris, where we found a stall selling an attractive assortment of homemade jams and jellies, some of which contained no pectin. Pectin is one of the many ingredients that contain MSG. Most jellies and some jams in the United States contain pectin. But there was no pectin in the jam at the Marché de Noël de Paris. Problem was that when we left the market, I picked up a jar of jelly, thinking it was jam; the alcohol in the wine that I had been drinking exacerbated the atrial fibrillation caused by the MSG in the pectin in the jelly, and I collapsed.

While I lay in bed, hopefully recovering, Adrienne was writing. She was talking to the computer. There was no one else to talk to, and she had to talk to someone to stem the tide of tears.

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Paris, December 1997. We're in Paris, Jack and I. There was this incredibly cheap airfare, and Jack was so very sure he could eat in Paris, as he used to, without getting sick, that I made a few phone calls, found a hotel, and booked our flight.

Jack says it's very hard being alive when you have to give up living. I find it hard, too. Waiting for him to eat some bit of processed food that he once ate without reaction. Living in fear that he will be struck down again at any moment. Then living in fear that he won't recover. Sometimes, I wish it was over. While praying that it never happens.

Jack filled out a questionnaire before we left. A questionnaire, he was told, that would help friendly researchers understand the mechanisms that underlie reactions to MSG. But as complete as that questionnaire seemed to be when we left the U.S., after being in Paris for five wonderful days, eating all our meals in restaurants, eating bread, butter, cheese, pastries, and rich dinners with thick sauces, I can tell you the information Jack submitted on that questionnaire was little more than half the story. Because here, in Paris, Jack was eating food that would kill him if he ate its counterpart back home.

There's a mindset, too, something Jack didn't mention on the questionnaire. Who would chance spoiling a Paris vacation for a bit of lousy airplane fruit salad clearly laced with chemicals to give it unending shelf life, bright and friendly colors, and an agreeable sweet taste? Especially when there was good, fresh, safe food in an insulated bag on the floor in front of him? Who would? Jack would. Jack did. And Jack got sick. Just tired, disoriented, and out of sorts from eating what was advertised as fresh fruit salad. Call it addiction. Call it denial. I think it's part of the disease.

Jack came to Paris to eat cheese. He was convinced he could eat it—enzymes and all—if it was made from unadulterated milk and enzymes that hadn't been bioengineered or spiffed up in other ways. I thought he was sure to die, or at least be deathly ill, so I ordered a fine hotel in a very fine location where I could leave him to the staff and go walking by myself if I had to, stopping back to see him from time to time during the day.

Jack did suffer some from the bout with airplane food, but he wasn't incapacitated, and he thrived on the food he found in France. He started with pastries and bread and food prepared with cheese and moved to a cheese course the next day for dinner. Granted, we ate only the best, but that included milk and butter and cheese and bread—none of which he could routinely tolerate at home.

Then, this afternoon, the afternoon of day five, Jack got careless. We were at a food fair near the Chateau de Vincennes where we bought wonderful bread and cheese and MSG-free jam to take back to the hotel for dinner. The plan was to eat dinner quickly and go out again walking. But something had evidently been lost in translation, because half an hour after Jack loaded a slab of bread with a mound of jam, he went into atrial fibrillation. The label, which no one had read when we returned to the hotel, announced that the jar contained jelly, not jam, and the jelly contained pectin.

It may be all over in the morning. He may be dead, but chances are he'll be alive and well and ready to take on another day in Paris. And if he is—alive and well—I wonder what he'll eat today. A banana, for sure. Probably bread and butter, but not the bread we got at the food market yesterday, since it might

have been more than just the jelly that did him in. It might have been the bread or one of the cheeses from the market or even a few leaves of lettuce he munched on from the supply I'd bought for myself. It might even have been that the pastries he had earlier in the day added to his problem.

We'll never know, because Jack isn't going to clone himself and do a series of double-blind studies designed to determine that MSG is safe like Ebert says he must if others are to believe he reacted to the pectin. Ebert would say Jack is really just an anecdote. "Not the food, at all," he'd say. Or, "Jack probably overdid it carrying heavy packages."

Ebert says there's really no evidence that MSG makes people sick. And he should know, because he gets paid directly by the IGTC, an organization with a secret membership led by the world's greatest producer of the chemicals that go into MSG, a company called Ajinomoto. Directly or indirectly, Ebert has friends in high places like the FDA, the U.S. Department of Agriculture, the American Dietetic Association, the Berkeley Wellness Newsletter, the Association of Family Physicians, the World Health Organization, the European Communities, and the National Institute of Nutrition out of Ottawa, Canada—just to name a few. Ebert is also a well-respected member of the Institute of Food Technologists (IFT), the people who design chemical concentrations that are passed off as food. Everyone knows that he's a toxicologist. He and his friend Steve Taylor, who also belongs to the IFT and works for the IGTC from his office at the University of Nebraska, assure all their friends at the IFT that MSG is safe. Doesn't it make sense that those who make money from using the product would believe them?

It's five in the morning Paris time—and I'm hiding. Hiding behind words. Words that pretend there's a difference between wars played with guns and landmines aimed at changing a country's internal political structure or physical boundaries, and wars for power played with unsafe food and drugs, herbicides and pesticides, nuclear power plants and atomic generators, toxic waste dumps, decimated forests and rain forests, all sold to the public as the insignificant fallout of "progress." All sold to improve some corporation's bottom line, and to enhance the power of **the** men and women who openly run **the** corporations and, I'd guess, probably run the world.

So I write down words, words no one will read, because **the** men and women who openly run **the** corporations also run the vehicles through which my words would be transmitted to others—if they were transmitted to others. They're directors of newspaper chains or media conglomerates. If not that, they sit waiting to withhold their advertising dollars from those newspaper chains or media conglomerates that would dare think to defy them and print the words of a "food terrorist." Yes, that's what we've been called. Maybe that's because we strike terror in the hearts of the men and women who run



**the** corporations that produce **the** potentially toxic food additives that cause infants to suffer neuroendocrine disorders such as obesity and reproductive disorders—not immediately, but later in life; cause immediate reactions such as asthma, migraine headache, cardiac tachycardia, depression, nausea and vomiting, seizures, and cardiac arrhythmia; speed, if not cause, the progress of neurodegenerative conditions such as Alzheimer’s disease and Amyotrophic lateral sclerosis (ALS); and cause cancer. Yes, cancer-causing heterocyclic amines, monochloro propanols, and dichloro propanols are produced under certain conditions when some forms of MSG are made.

It’s six in the morning Paris time. I wonder when Jack will be up and ready to take on the day. I wonder if the sun will shine today, or ever.



## 5 | *Jack: Why Me?*

Not everyone is sensitive to MSG, at least not as sensitive as I am. Why me?

I don't remember much about my early years. When I was born, my parents lived in a small house on the south side of Chicago near present-day Midway Airport. My father, who was born and raised in St. Louis, had dropped out of school after fourth grade to help support his family. As a teenager, he'd built a thriving poultry business, but wanting to better himself, he'd moved to Chicago, where a relative would train him to be a butcher. It was in Chicago that he met my mother. They were married on January 4, 1929. My sister was born on August 18, 1930, and I followed on April 26, 1935.

Not long after I was born, we moved to a two-flat apartment. I remember the apartment and Mrs. Zimmer, who owned the building and lived upstairs. She was a wonderful lady who treated me to yummy cookies and big cold glasses of delicious milk. She said it was just like the milk I refused to drink at home, delivered by the same milkman. But I could tell the difference.

I also remember my grandmother, a wonderful grandmother married to cranky old Grandpa Felix. My father and grandfather had discussions more than once on the subject of children playing at our house. These were discussions, not arguments. There were never arguments in our house. But try as he might, my father couldn't convince Grandpa Felix that if everyone played at our house, even if they made a mess, my mother would know where I was and who I was playing with, and that knowledge was priceless.

It was a rare blood disease that eventually did in Grandpa Felix. Long after he died, my mother preached that I was going to have the same disease because I, like my grandfather, wouldn't eat vegetables.

I didn't drink much milk, either. I really didn't like it. The exceptions were chocolate milk, and the delicious white Wanzer milk served by Mrs.

Zimmer. What I really liked was meat. Red meat. I was always a big protein eater. I also liked the bukta (a bohemian coffee cake), cinnamon rolls, streusel-covered coffee cake, and apple strudel my mother baked on Saturday for breakfast on Sunday. I've never found a bukta as wonderful as hers, but I never gave up looking, and tasting.

I must have been four years old when my parents bought an empty lot on Winchester Avenue in north Beverly Hills on the south side of Chicago. There were no streetlights. There was no public transportation. The closest house was two blocks away. My father had always wanted to live on a farm, while my mother was definitely a city person. I guess this was a compromise.

The lots behind our house were still empty when I started school. I walked both ways as everyone did, for the idea of special buses to take children to school hadn't yet occurred to anyone. The total enrollment of my school was just about 300 pupils; classes were small; and school was fun.

I had a lot of friends and I played a lot of sports. A half block from our house was an overgrown field owned by the school district that we made into a baseball field. Jimmy Finkleton's parents allowed that we could use their push lawn mower to clear the field if we wanted to; and since none of the other kids could push the mower, I cut out the baseball field.

I was in many fights, none of which I started, and none of which I lost. My father had made it very clear that he never wanted to hear that I hit someone, or that I started a fight, but if someone pushed me, I could certainly push that person back. As long as I didn't start the fight, he wasn't opposed to my winning. He and my mother also made me aware that some people are prejudiced. My father told me that if people picked on me for no other reason than being prejudiced, that gave me the right to hit them.

I was just starting 8<sup>th</sup> grade when my father's doctor suggested that he retire and take a lengthy trip to relax and rid himself of the pressures of business. My sister had started college, so my parents decided that for a full semester they would go to Florida and I would go with them.

I remember seeing signs in front of hotels that said no Jews or blacks allowed, and as we got deeper into the south, they were more prevalent.

My father used to talk about how terrible this was. He pointed out that if we were driving late into the evening and had to find a hotel, we could lie about being Jewish and get a bed. But a black person couldn't walk into that hotel and convince staff that he wasn't black.

In the South, we'd go into grocery stores and see drinking fountains painted a particular pink/brown color for black people to use. To this day, the color brown bothers me. A major portion of the report I did for school that year focused on the prejudice we found in the South.

My father was a remarkable person. Hard work, compassion, and integrity defined the man. I built my life on the lessons he taught me through word and example. He taught me all I know about judging people. He taught me that certain features told volumes about a person. When I had my first assignment in hospital administration, the personnel director would interview potential key employees and have the best three candidates interviewed by the administrators, which included me. He claimed that while he asked most people to talk to candidates to rate them, I listened to the sounds of their voices, looked for certain features, and read the bumps on their heads. History showed that I made the best selections. My father taught me that.

As a child, if I'd come home injured, my father would ask, "Where does it hurt?" If I pointed to my leg, he'd say, "Well, that's very far from your heart. I think you'll be all right."

We were taught never to lie. I can hear his words as though he was speaking today. "Don't ever lie, cause if you lie, sometime later on someone will ask you the same question and you'll have to remember what the lie was. If you tell the truth, it's very easy to remember."

Finally he would say, "Everyone puts his pants on one leg at a time. As long as you have something to say and are not lying, go up to people and say what you have to say. They might not like you at the time, but they'll respect you for it."

I was 14 years old when I entered Calumet High School. Now, I couldn't walk home for lunch, and there was this thing called homework, which I'd never done before.

I liked school all right. There wasn't anything I didn't like at the time except vegetables. Anyhow, if things weren't just as I thought they should be, I could make improvements.

I did well in school with little or no effort. When teachers gave out homework before the end of class, I would finish my assignments before class was over.

The year before graduation, after taking the course exams, I was number two in the class. As soon as I realized I had good enough grades to go to college, I slacked off. I was number 16 when I graduated.

In my second or third year of high school, my mother developed a uterine tumor and became gravely ill. She was so bad that my father had me live with the Bermans, distant relatives, at their summer cottage on Pistake Lake until my mother recovered. At Pistake Lake, I'd go fishing every day with Mr. Berman.

My father liked Pistake Lake, and saw that I liked it, too. "Soon you're going to be out of high school and will be drafted into the army, and who knows, might get killed. So you might as well enjoy yourself, and I'm going to go out there and buy a property."

After the house was built, I'd take my mother to Pistake Lake to measure for curtains, furniture, and such. The last time we made the trip, the road to the house from the main road was covered with ice, and a car speeding toward us hit us head on. In truth, I don't remember what happened after that. I do know I lost consciousness, and I remember seeing a gaping hole in the other car's hood and motor compartment. I also remember that our car was barely moveable—that we made it home very slowly, turning left when necessary, but not able to turn right.

Years later, it came to me that it might have been that accident that set me up for MSG sensitivity. A blow to the head? Damage to the blood brain barrier that is supposed to keep MSG from flowing freely into the brain?

Summers I worked at the local A&P as a meat cutter, working there through my four years of college. I'd cut meat, go home for dinner and go out fishing. On one exceptionally hot day, just before starting college, I gassed up our mahogany Chris Craft before dinner, realizing only too late that the pump registered more gas than the boat's gas tank would

hold. I assumed the overflow had gone into the lake, when in truth the bulk of it had gone under the floorboards. Not knowing that, I returned home, docked at the pier, quickly went in to eat dinner, and returned to the boat with my sister and father to go fishing.

I remember pressing the start button. The next thing I remember was waking up and not being able to see anything because there were things on me, and the entire perimeter of the boat was on fire.

I shoved my father off from on top of me, shook off the debris that had been under him, and saw Mr. Berman from six houses down, running. Mr. Berman never ran. My mother was on the front porch screaming, "They're dead, they're dead," and the dog was barking. Moving my father woke him up, and the two of us got out of the boat together. To this day, I don't know how we did it. I had a perfect shave on one side of my face, and my eyelashes and eyebrows were gone on that side, too. I had a rather deep cut on the little finger of my left hand. The steering wheel I'd been holding was folded in half, the glass windshield was entirely missing, and my mother was screaming that my sister was still in the boat. She lay unconscious in the back with lipstick smeared across her face, giving the impression that her whole face was on fire.

"Quick. Get a bucket of water, there's fire," my father commanded as he pulled my sister from the boat. So I ran to the pump at the back of the house, and pumped a bucket of water to bring to the lake and the burning boat. The lake? I'd brought a bucket of water to the lake.

It was shortly after the boat explosion that I took my placement exams at Northwestern. I might just as well have stayed at home, because mentally I was absent.

I knew nothing about applying to college. My best friend, Herb, was applying to Northwestern, and we'd agreed that we would live together. Somehow, I got an application and filled it out. I didn't apply to any other school. It never occurred to me that I might not be accepted.

For my first two years at Northwestern, I lived in Sargent Hall, a relatively new high rise dormitory. Herb had joined a fraternity that didn't accept Jews. Eventually, I moved with Dick, my roommate, to a newly renovated dormitory (that was actually not quite finished), and immediately found that we were uncomfortably cold at night. After

protesting to the university a number of times without getting their attention, I found the home phone number of the dean and called him. Every night in the middle of the night I called the dean, gave him my name, told him where we lived, and explained that while he was comfortable in his nice warm bed, we were freezing. Remarkably, after the third day, or should I say third night of phone calls, a heating crew showed up and the issue was resolved.

College was generally unremarkable. I was a biology major and became so interested in genetics that I took independent study with a genetics professor.

My father had wanted me to be a physician, but I couldn't stand blood. Instead, I looked into hospital administration. I visited hospitals to see what the administrators were doing. I visited with two administrators whom I found to be inadequate, and determined that I could easily do better than they did. I had to take some business courses, but they were easy.

Except for the prom in high school, I didn't date, and I wasn't much more aggressive in college until Dick fixed me up with Tena Ross, a University of Illinois coed.

Down the road, I applied to Northwestern's program for hospital administration. My two greatest challenges were convincing the faculty that my age wouldn't be a detriment to becoming a successful hospital administrator, and that I could find employment in a world where Jewish administrators were a rarity.

I graduated in June 1957. Shortly thereafter, Tena and I were married. I had a part-time job in the credit department at Weiss Memorial Hospital and Tena worked for an obstetrician, preparing and reading pap smears.

After a year of intensive coursework, field trips, and lectures, I accepted a residency at Mount Sinai Hospital in Milwaukee, and we moved to a duplex on the city's southeast side, convenient to Leon's frozen custard stand as well as weekends in Chicago.

In September 1958, after an extremely difficult delivery, my first son was born with the umbilical cord wound round his neck. It came as no surprise, then, that Tena acted strangely after the delivery. "Post partum depression," her physician called it.



Looking back, I think Tena suffered little bouts of depression almost continuously from the day our first child was born, but I didn't give them the serious consideration they deserved.

Nineteen months later, Tena delivered a second son, and was again diagnosed with post partum depression. But before the next summer was over, depression had moved on to full-blown mental illness.

Tena couldn't take care of herself, much less care for the children. There were days she left the baby in bed without changing his diaper. Rose, our downstairs neighbor, would stay with Tena or check in on her while I was working, but nothing was being done to help her. Blatantly obvious as her problem might have been to others, I was in denial, and failed to reach out for professional help.

I reached out to no one. I wouldn't share our problem with my family because I didn't want to stress my father, whose health was delicate. It was meaningless to share our problem with Tena's family, for when I spoke of her problems, her mother countered that it was my mental health that was in question. Only my friend Leonard insisted that something be done to help Tena. But finding help would be to no avail, because Tena would convince every physician or psychologist she visited that she didn't have a problem.

At the end of our stay in Milwaukee, I moved my family back to Chicago, where I took a job as administrator of Fox River Pavilion, a facility that was just in the planning stages. It was a new concept in medical treatment—moving those who otherwise would have extended hospital stays to more independent facilities. We bought a house in Skokie and almost immediately succeeded in finding Tena a psychiatrist. It took her one visit to convince the psychiatrist that she hadn't a problem in the world.

Then came one of the worst days of my life. It was 1966. I came home to a house ransacked from top to bottom, with everything of value gone. There were no pictures on the walls and no clothes in either the children's room or Tena's drawers. There were no children. But my clothes hadn't been disturbed, so I assumed Tena had taken the children with everything else of value to her aunt's house across the street. Without hesitation, I crossed the street and announced that I'd come to pick up my kids.

“You can’t have them,” came her aunt’s reply, to which I responded, “They are my children. They aren’t your children, and I want them now. If you want to call the police, call the police. It will be a terrible scene. If you refuse to do this peacefully, I’ll knock the door down, walk into the house, and physically take them.”

The children came home with me. Needless to say, Tena did not.

The next day, my mother came to care for the children. She stayed the year. Tena filed for divorce. I fought the divorce, but in the end didn’t have a choice. Tena demanded the bulk of our assets (which were few) and my new car, but left me half the house. It was not a pleasant situation, I can assure you, but I had the only thing that mattered. I had full custody of my children.

I was divorced. I was overburdened at work and still upset about the end of my marriage and all that had led up to it. At home, the boys were being taken care of, but they were being spoiled. Spoiled? No, not spoiled. There was no discipline.

After four years at Fox River Pavilion, I had taken a job as administrator at Martha Washington Hospital, a floundering facility of about 50 medical beds plus a 100-year-old alcoholic treatment center. The hospital had been losing money, and in danger of having to close its doors.

I was spending well over 40 hours a week at the hospital and taking care of the boys had turned out to be too much for my mother, so my sister, her husband, and their newly adopted son came to live with us. My sister soon began insisting that I find myself a wife.

~ ~ ~

I met Jack at a “dance” for parents without partners. Maybe he noticed me because I was a wallflower, maybe because I was small. Either way, he asked me to dance and we hit it off immediately. It was obvious to him, and it was obvious to me, that neither of us wanted to be there. I’d come because my friend Margie wanted moral support. Jack had been pushed out of his house by his sister, who was tired of 7 to 11 child care, and was pressuring Jack to find a wife. I can’t say it was love at first sight, because it wasn’t, but clearly, something very special happened.

I wouldn't let Jack drive me home. That seemed to bother him, but he evidently got over it, for the very next day he was on the phone, asking me to celebrate St. Patrick's Day with him by going to see Tommy Makem and the Clancy Brothers.

We were married in August of that year. There were 14 of us at the wedding: my parents, Jack's mother, our sisters, my brother and his wife, Jack's brother-in-law, and our four children. We had a couple of thousand dollars between us, two houses, one mortgage, two cars with one being paid out over time, four children aged 2, 4, 8 and 9, and a dog named Cuddles that no one could train.

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After the wedding, my sister and her family moved out, and Adrienne and the girls moved in. I never really gave any thought to where we would live. I just assumed that we would move into my house because it was a much nicer house than Adrienne's. I never thought to ask if she wanted to do that or buy a new house or something else. She never brought up the subject.

It was probably the best move I ever made—the best thing that ever happened to me. I was very concerned about the welfare of the boys. Adrienne helped them grow into the fine young men they are today.

From time to time, we used to say we should have written a book about putting two families together. From the very beginning, we were one family. We were mother and father to all the kids. I like to believe I treated the girls as my own, and Adrienne treated the boys as her own.

It was a relatively easy adjustment for the girls to make. Adrienne worked with them on understanding the benefits of having two fathers: two fathers to love them, two fathers to bring birthday presents.

It was more difficult for the boys. There were now rules, and the rules were enforced. Adrienne refused to make hot pasta for one child and cold pasta for a second child to be served at the same meal. Adrienne took charge of the vitamins, aspirin, and any medications the children might be using, insisting that she'd dispense what was needed when the children needed something. The children's lives were further impacted by the fact that their other parent would take them on weekends. Not every weekend, but some weekends.

~ ~ ~

We had it all. Jack had a big house and I had a little house, so we moved into his big house.

He had boys and I had girls; they became brothers and sisters. He spoke well and I wrote well; so when there was need, we helped each other. Jack even liked to talk, while I liked to listen. That didn't change. Not for a long time.

In 1968, Jack was administrator of Martha Washington Hospital. He worked long hours. A few months into the marriage we added Mariah—Mr. Mariah when we looked more carefully—the cat who would walk the younger children to school a short six blocks away, and wait in the early afternoon to walk them home.

Under Jack's guidance, the hospital became highly profitable. Jack felt things were going quite well, both for the facility and himself, when he learned that from the beginning, the board president had planned to let him go as soon the building program was completed. There were words, there was discussion, and there were protests from both staff and physicians demanding that Jack not go. Circumstances, however, convinced Jack that this was not a board of directors he wanted to work for, and he resigned—with no place to go.

Jack had just resigned when he bumped into Bill Ceas, the man who'd financed Martha Washing Hospital's new building. Ceas had resigned his partnership in the firm he'd been with, and was going to open a firm of his own. Ceas said he'd wanted to talk to Jack about joining him, but felt it inappropriate while Jack was working for his client. Now that Jack was free, he asked Jack if he'd be interested in becoming an investment banker.

So it was that in 1971, Jack the hospital administrator became Jack the investment banker, flying around the country, working with small and rural hospitals. Investment banking for Jack was simply an extension of being a hospital administrator. Everything that was vital to running a hospital was important to the development of a sound financing package. Thus, Jack dealt with all the challenges a hospital administrator faces plus the additional burden of providing affordable funding. Jack loved the challenges, and his clients loved him. In a short time, he'd made a name for himself among small and rural hospitals.

There was nothing Jack couldn't do. There was nothing he wouldn't do for a client as long as it was moral, ethical and legal.

I'd never been in the business world per se, and I marveled at the way Jack made all his different projects work for him. I was also impressed at the ease with which he moved from one problem to another, working with boards of

directors, community leaders, and politicians, solving one problem after the other until a job was done.

There was no job that went from start to finish without a catastrophe. Papers lost on the day of the closing and the city clerk on vacation. The city clerk found. A project stopped for lack of a legal base. A law enacted. Jack handled the stress of it all like those problems never existed.

Family life always included Tena. At first she'd pick up the boys on Fridays after school and bring them home a day or two later. Then there were phone calls asking to make adjustments in the boys' visitation schedules. There was the issue of a child acting out—actually tormenting her—during weekend visits, which came to our attention and had to be corrected. There was the issue of a summer vacation cancelled when a rare, secretly compassionate, family member informed us that the boys' mother was, at that time, suicidal.

As Tena had predicted, she continued to go through bouts of depression. Now, each time she became depressed, Tena would sue Jack. She had taken everything of value except the boys, and Jack had even borrowed \$1,000 to complete the divorce settlement. Now, she'd call in a rage, wanting to change her visitation dates, but nothing more. No matter how Jack cooperated, she'd take him to court, suing for what he was willing to give her, forcing him to use what little money he might have had at that moment for legal fees.

Family life hadn't changed when Jack started his new career. He was home less than he had been before, but that was okay. What wasn't okay was that when Jack would fly to a current or potential client to make a presentation, he left the plane exhausted, even if he'd only flown an hour.

Jack had his own personal travel strategy. He preferred to drive to a client if he could, arrive in time to make his presentation, conduct his business, gather his data, and somewhere in the course of all of that, take the client out to dinner. I think it's safe to say that with the possible exception of the children and myself, food has been Jack's greatest love. If he had to, he'd spend the night in town and drive home in the morning, but if he wasn't too far from home, he'd turn up some time before dawn.

For flying visits, he developed a slightly different strategy. Since flying made him incredibly tired, he always arranged to arrive a couple of hours before his first appointment, grab a motel, take a nap, and then meet his clients. He actually scheduled visits to allow himself a 2-3 hour nap before going to a meeting. Arriving at his destination a day ahead of time worked, too.

It seemed strange to me that Jack was able to drive a long way and arrive relaxed, ready to work, but when he flew to jobs, he arrived tired. I figured

he just liked to drive his own car when he could. He'd always loved cars. Otherwise, it didn't make sense and it wasn't important. Correction. It didn't make sense and it didn't **seem** important.

We began to travel together whenever I could arrange to leave the children. Jack was fun to travel with. Any way you look at it, Jack was fun. I tend toward the rigid and compulsive, being an experimental psychologist with tunnel vision. That's great in the laboratory, but rather dull outside.

Jack made my world anything but dull. We explored good food, good theater, old places and new places—much that was new and different. A new sight, a new sound, a new artist, a new city—even a new shopping center made him smile. Happily, it's always been his greatest pleasure to share those things with me.

Sometimes, of course, we overindulged. I remember being in Mexico City, having dinner with a Mexican physician friend, when Jack turned a pale greenish yellow, stumbled away from the table, tripped down the two steps leading to the men's room and (I was told) collapsed there in a flood of perspiration.

The diagnosis? "Montezuma's revenge." I remember thinking it would be wise, in the future, to avoid annoying Montezuma.

Back home, I made inquiries. "My husband was taken ill in a restaurant in Mexico City. Do you have any idea what it might have been?"

"Cinnamon," said one. "Cardamom," said another. Poor Jack. I fed him a spoonful of cinnamon one day, and when he didn't go into anaphylactic shock, he got cardamom. I don't remember what all I fed him. I've probably repressed it for the agony I put him through that week—before he collapsed in another restaurant. That was the day I demanded he see our internist, Monte Levinson.

Dr. Levinson, what a man! What a physician! He listened. His nurse drew blood, and he sent us away with instructions to return the following Monday. "And Jack," he said as we headed for the door, "Adrienne really is stressed with all that you've been through. You know. Not knowing where the anaphylactic shock is coming from. There's a really fine Chinese restaurant that just opened in the neighborhood. Take Adrienne there for dinner Sunday, share a bottle of wine, and I'll see you here on Monday."

So it was that Dr. Levinson determined that Jack's problems—from falling asleep on airplanes to going into anaphylactic shock in restaurants—came from a sensitivity to monosodium glutamate.

Diagnosis? Monosodium glutamate sensitivity.

Treatment? Avoid it.

Jack checked out the ingredients of the Planters Dry Roasted Peanuts that were served on airplanes, and there were those two little words: “monosodium glutamate.” Monosodium glutamate all by itself made him tired, while monosodium glutamate with a glass of wine threw him into anaphylactic shock. At least now that he knew what the problem was, he could avoid it. Yes? No?

There’s one truth about sensitivity to MSG that is inescapable. MSG is unavoidable. Find a can of baked beans that you can tolerate, always read the label to be certain that no monosodium glutamate has been added to the ingredients, and when you recover from the world’s worst migraine headache and call the people who made the beans you’re told that monosodium glutamate had been added to the formula, but the labels on the bean cans had not yet been changed. Find barbeque ribs made without monosodium glutamate, and the next time you order them the ingredients used to make them will have been changed. As long as Jack could remember, he had enjoyed the barbeque ribs at Carson’s restaurant in Skokie, knowing that they were safe for him to eat, never asking about monosodium glutamate in their preparation. Why should he ask about monosodium glutamate? He had eaten there a dozen times or more and not had a problem until he had as bad an attack of anaphylactic shock as I have ever seen. It had not occurred to Jack that Carson’s barbeque recipe might change.

Even with four children, we managed to travel. One of our first trips was a driving trip to Florida, visiting Disney World in Orlando and Cape Canaveral near Jacksonville.

In 1974 or so, we took Jack’s mother, my parents, the four children and a mini-van through Holland, Belgium, and parts of Great Britain. Our oldest son was getting close to college age, the baby was old enough to travel, and we figured it would be the last chance we’d have to travel together.

It was a wonderful vacation, filled with great memories: the bees at St. Andrews that were attracted to the hairspray on the grandmas’ freshly done hairdos; the baby being stung by a wasp during dinner in Scotland; the children mastering the subway in London much better than Jack and I did; the pork kidneys I had for dinner when I, the only French speaker, translated the menu wrong and ordered them for Jack; and the wonderful caves in the middle of nowhere in Belgium, at the end of a seemingly endless drive, worth every bit of the inconvenience of getting there.

In 1979, we made the first of two trips to Hong Kong and China. Going to China with sensitivity to MSG? What feasts we had. Everything was fresh: rice

from the fields, vegetables from the gardens, chickens killed in the yard as we watched. Not to worry. Piece of cake. Jack was sensitive to monosodium glutamate. No more, no less. He simply asked that his food be made without monosodium glutamate and everyone was glad to accommodate.

In March 1984, friends from Japan came to stay with us in Chicago. June took us to San Francisco. In August, it was a trip to Denver. At the end of the month, we sent the baby off to college.

The first week in December, Jack and I flew to Amsterdam, rented a car and drove to Paris, stopping for dinner at Boyer les Crayeres in Reims. Jack had accumulated enough points with Holiday Inn to give us a free seven-night stay at the Place de la Republic. In truth, the idea of staying at a Holiday Inn in Paris didn't sit well with me. To my surprise and delight, however, our room in the marvelous old building was comfortable and spacious, and the breakfast buffet was sumptuous. To this day I look forward to August, when I can find the fresh figs I first tasted there.

It was another wonderful vacation. We kept to our regular routine: walking and walking, spending time in museums, eating something delicious for lunch (which often included hot chocolate), stopping for a pastry when our feet grew tired, and having a grand dinner at a two-star restaurant. On December 4, we dined at Le Bernardin, December 5 at Duquesnoy, December 6 at Gerard Besson, December 9 at Chez Michel, and December 10 at Trou Gascon.

It was a marvelous time to be in Paris. That December was as mild as December in Paris will ever be. The exchange rate was in our favor, and we bought presents at Baccarat and Lalique, and gloves for ourselves at Muriel. But there was something more, something very special. It was as though Jack had reclaimed his youth. "We'll buy an apartment, buy a car to park at our apartment, and live here. What do you think? We really must do that. There's something in the air here in Paris. Maybe it's like this in all of France. I can't say that I've been feeling poorly. Just getting old. But I feel wonderful here. I haven't felt this well in years."

Of course we didn't buy the apartment. Not with children still in college and possibly looking at graduate school. But every once in a while I'd hear what turned out to be a recurring refrain: "It was so wonderful in Paris. The air was so good there."

In May 1986, we traveled to Japan with my sister. We flew to Tokyo, then took trains, buses, and ferries through much of the country. In Japan, as in Hong Kong and China, a simple request to have food prepared without monosodium glutamate didn't offend anyone. For Jack, there was never a problem.



In September 1987, Jack and I visited Hong Kong, Guangzhou, Guilin, Kunming, Xian, Beijing, Nanjing, Wuxi, Suzhou, and Hangzhou on tour with others. Jack asked for food without monosodium glutamate in it, which was always graciously provided without calling attention to his special request. Evidently, one of the couples on our tour thought Jack was getting something better than the rest of us, and asked if they could have the same meal. Graciously, our hosts brought the meal requested. Not so graciously, the couple sent it back to the kitchen, declaring that it was tasteless.

We visited France again in October 1988, this time with a tour put together by XO Travel Consultants Ltd., called Wine Routes of France. Our guide was a wine merchant who augmented our itinerary with trips to vintners from whom he bought wine. We tasted wine from 10 in the morning till 4 in the afternoon and then, together, had the finest dinners the region had to offer. The people, the wine, the guide, the food, the weather—nothing could have been better.

Jack's business grew, and now it was his very own business, for he'd left Ceas and Company and opened his own investment banking firm. With his own business came greater responsibility and, I suppose, greater pressure. Then, with the passage of time, came signs of aging. Short temper here, short temper there. Jack could be tired, cranky, argumentative and verbally abusive. He didn't have as much energy or stamina as he used to, and he had an aching bone or two. "Blood pressure a bit too high," said the doctor. "Time to take off weight."

Hindsight, as they say, is 20/20 vision. If Jack or I had stopped to think about it, would we have realized that when traveling outside the country, Jack always felt better than he did at home?



## 6 | On the Art of Deceiving the Public

### HOW CAN IT BE?

Why does the FDA allow the intentional addition of neurotoxic processed free glutamic acid (MSG) to processed food?

Why isn't the U.S. population aware of MSG's toxic potential?

Why aren't healthcare professionals aware of the fact that obesity, reproductive disorders and retinal degeneration can be caused or exacerbated through the use of MSG?

Why aren't healthcare professionals alert to the symptoms of MSG toxicity?

### ***#1: Start with a Well-Funded Organization***

History tells us that in 1969, the IGTC was founded as an association of companies engaged in the manufacture, sale and commercial use of glutamates. It sponsored, gathered, and disseminated research on the use and safety of monosodium glutamate; designed and implemented research protocols and provided financial assistance to researchers; promoted acceptance of monosodium glutamate as a food ingredient; and represented members' collective interests.<sup>99</sup> Those collective interests were to sell monosodium glutamate. Ajinomoto Co., a leading manufacturer of monosodium glutamate, appears to have been the IGTC's principal sponsor.

It was reported in 1994 that the IGTC was an association composed of physicians and/or scientists either employed by producers or users of glutamic acid and its salts, or doing research on it in university laboratories. Its annual budget was \$250,000. Membership was \$2,000/year.<sup>100</sup> A former IGTC member told us Ajinomoto made up any shortfall between member-provided funds and that quarter-million.

In 1977, the IGTC spun off The Glutamate Association, with both organizations accommodated under the umbrella of The Robert H. Kellen Company of Atlanta, Ga. and Washington, DC. Kellen is a trade organization and association management firm that specializes in the food, pharmaceutical, and healthcare industries. Richard (Rich) Cristol, executive director of The Glutamate Association, was also vice president of The Kellen Company; and in

1992, Andrew (Andy) Ebert, Ph.D., chairman of the IGTC, was also senior vice president of The Kellen Company.<sup>101,102</sup>

Membership in The Glutamate Association is secret. In the early 1990s, however, a member friend told us that Ajinomoto, Archer Daniels Midland, Campbell, Corn Products Corporation, McCormick & Company, Nestle, Pet Foods, Pfizer Laboratories, and Takeda were among its members.

***#2: Identify and Employ MD's and PhD's to conduct research designed by your organization, and speak publicly about the safety of your product.***

Once established, the IGTC assembled a cadre of scientists and others who conducted research for them and/or spoke publicly about the safety of monosodium glutamate. In the 1970s and 1980s, research sponsors were acknowledged. The names of researchers Altman, Anantharaman, Auer, Bunyan, Ebert, Fernstrom, Filer, Garattini, Geha, Germano, Giacometti, Goldschmiedt, Heywood, Iwata, Kelly, Kenney, Kerr, Matsuzawa, Morselli, Newman, Owen, Patterson, Pulce, Reynolds, Saxon, Schiffman, Simon, Stegink, Stevenson, Takasaki, Tarasoff, Williams, Woessner, and Yang have been notable, although there are others. More recently we've seen the names Torii, Shi, Jinap and Hajeb added to their roster.

Steve Taylor deserves special mention. Although a prominent representative of the glutamate industry, he's not included with the others because his ties to the IGTC have not openly been acknowledged. Although Taylor has repeatedly spoken out about the safety of MSG,<sup>103</sup> only once to our knowledge has he acknowledged his ties to the IGTC.

Taylor has done little or no basic research related to monosodium glutamate safety/toxicity, but is respected for his knowledge about food allergy. He has served as an officer of the Toxicology and Safety Evaluation Division and a member of the Expert Panel on Food Safety and Nutrition of the IFT.<sup>104</sup> His name appears prominently on advisory boards such as the Food Allergy Network<sup>105</sup> and editorial boards such as the Encyclopedia of Food Science Food Technology and Nutrition.<sup>106</sup> When he introduces himself, he typically refers to his University of Nebraska affiliation, but not to the fact that he's an agent of The Glutamate Association, the IGTC, and/or Ajinomoto.<sup>107,108</sup>

A number of years ago, Taylor appeared with Jack on a small market television program in Chicago, discussing MSG. That was the only time we heard him admit to being a spokesperson for the glutamate industry. Jack still chuckles when he recalls how Taylor bolted from the studio after the show, possibly because he hadn't been able to enhance the image of monosodium glutamate, or maybe because toward the end of the show, the moderator had asked him if he wanted Jack dead.

The focus of researchers who represent the glutamate industry has always been to demonstrate that use of monosodium glutamate is “safe.” The early research of both Richard Kenney and Roland Auer had suggested that glutamic acid might have toxic potential,<sup>109,110</sup> while their subsequent studies and/or public statements proclaimed that MSG is safe.<sup>111,112</sup> We found it interesting that their change in focus coincided with research support provided by the glutamate industry.

By and large, those who’ve represented the glutamate industry have produced research relative to the safety of monosodium glutamate only in response to encouragement from the glutamate industry. Moreover, although the first challenges to the safety of monosodium glutamate were based on brain lesions and subsequent neuroendocrine disorders, only two glutamate industry representatives, Richard J. Wurtman, M.D. and Roland Auer, M.D., Ph.D. have been neuroscientists.

Andrew Ebert has been key to the operation of the IGTC. This professionally respected pharmacologist and toxicologist has been with the IGTC from the beginning, recruiting researchers to carry out the research designed for them. In each case, that research has enabled Ebert’s people to proclaim (without justification) that a new study has demonstrated that monosodium glutamate is a harmless food additive.

Ebert is the personification of the IGTC, and his influence can be felt at every level. He’s served on the FDA Food Advisory Committee; the Grocery Manufacturers of America (Technical Committee on Food Protection, the Codex Subcommittee on Food Additives and the GRAS-FASEB Monograph Committee); the National Food Processors Association; the Institute of Food Technology (Technology Toxicology and Safety Evaluation Division, and Scientific Lecturer); the National Research Council of the National Academy of Sciences Assembly of Life Sciences (Food and Nutrition Board: the Committee on Food Protection, and the GRAS List Survey); the AMA (Industry Liaison Panel); the FAO/WHO Codex Alimentarius Food Standards Program as an industry observer; and the International Food Additives Council as executive director.<sup>113</sup>

As a food industry pharmacologist and toxicologist, Ebert has provided scientific and technical expertise for programs of many associations managed by The Kellen Company.

Ebert has also been an active member of the IFT, but he’s not the only IFT industry spokesperson. Daryl Altman, M.D., a spokesperson for the glutamate industry, worked for former IFT president Al Clausi, vice chairman of Allergx, Inc. and its medical affiliate, The Food Allergy Center. Dr. Altman often speaks, or spoke, publicly about the safety of monosodium glutamate, often with Steve Taylor. The IFIC promotes them as speakers without mentioning the fact that they represent the glutamate industry. L.T. Chiaramonte, M.D., who’s co-

authored work for the IGTC with Altman, has served on the medical advisory board of The Food Allergy Center.

It may be that Ebert no longer sits as chairman of the IGTC.<sup>F</sup> In 2009, we came across his name as being on the IGTC Executive Committee,<sup>114</sup> but have seen little more about him since then. His move from the glutamate industry limelight coincided with our posting information on our website about his role in designing the IGTC's "scientific" studies and supplying aspartame-laced placebos to his researchers. Recently, we've seen the names of Takeshi Kimura and Yoshi-hisa Sugita, Ph.D., associated with the IGTC.<sup>115</sup> Both come directly from Ajinomoto.<sup>116,</sup>  
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I Googled Ebert just to see what he's been doing lately, and at the time came across a bio that listed him as a consultant to The Kellen Company (which shares offices with the IGTC), but failed to mention any association with the IGTC. I also found that he headed his own consulting firm (EMT, Inc.) and was still active in groups such as the U.S. Pharmacopeia (USP), where in 2010 he served as chair of the Food Ingredients Expert Committee.<sup>118</sup> According to the USP website as it appeared on June 29, 2010:

*"The United States Pharmacopeia (USP) is a non-governmental, official public standards-setting authority for prescription and over-the-counter medicines and other healthcare products manufactured or sold in the United States. USP also sets widely recognized standards for food ingredients and dietary supplements. USP sets standards for the quality, purity, strength, and consistency of these products—critical to the public health. USP's standards are recognized and used in more than 130 countries around the globe. These standards have helped to ensure public health throughout the world for close to 200 years."*<sup>119</sup>

In 2010, we saw Ebert on YouTube speaking as chair of USP's Food Ingredients Expert Committee, discussing the seventh edition of the Food Chemicals Codex and the importance of quality ingredient standards in food safety.<sup>118</sup> Somehow, I don't think Ebert is suggesting to these people that monosodium glutamate has toxic potential.

Ebert has worn, and still wears, so many different hats at one time, that when he presents information to any person or organization, he can point to his affiliation with a neutral organization while failing to mention an affiliation with an organization that his audience might find inappropriate or offensive. The importance of this attribute was driven home when we saw FDA Commissioner

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F - Following disclosure of the fact that Ebert shepherded the use of aspartame in placebos of double-blind studies on the safety of monosodium glutamate, his name has not appeared prominently outside of industry circles. As this is being written, officials from Ajinomoto appear to be in charge of the IGTC.

David Kessler's letter to Dr. Ebert of the Kellen Corporation, inviting him to be a member of the FDA Food Advisory Committee. His nomination to that advisory committee didn't refer to his affiliation with the IGTC, but listed him only as senior vice president of The Kellen Company. His acceptance was written on The Kellen Company letterhead.<sup>120</sup>

Ronald Simon, M.D. and Donald D. Stevenson, M.D. of Scripps Clinic and Research Foundation, La Jolla, Calif., have vigorously represented the glutamate industry since 1995. In 1991, Simon, with Dean D. Metcalfe, M.D. and Hugh R. Sampson, M.D., had praised the work of David Allen, M.D., who'd found that MSG can act as an asthma trigger. In fact, Simon, Metcalfe, and Sampson had included Allen's study in their book, *Food Allergy: Adverse Reactions to Foods and Food Additives*.<sup>121</sup> In a letter to Dr. George Schwartz, which Schwartz shared with Jack, Allen wrote, "Last week my friend Ron Simon from the Scripps Clinic called me and asked me to participate in a symposium at the American Academy of Allergy meeting in San Francisco in March of next year. I'll be speaking on sulfites and MSG and their potential to provoke asthma."<sup>122</sup>

On August 31, 1995, the FDA released a report on the safety of monosodium glutamate in food, done by FASEB.<sup>95</sup> In that report, FASEB acknowledged that monosodium glutamate was an asthma trigger, and that doses as low as .5 grams MSG had triggered monosodium glutamate reactions. On the day before that report was to be released, Simon and Stevenson wrote to inform the FDA that they believed FASEB had made a grave error in stating that monosodium glutamate was known to be an asthma trigger, for they had found Allen's work to be lacking.<sup>123</sup> In 1995, Simon and Stevenson were engaged in research funded by the IGTC.<sup>124</sup>

We found it most interesting that Simon and Stevenson knew what was in the FASEB report before it was released. We were reminded that in 1994, glutamate industry friend and *Food and Chemical Toxicology* editor Joseph Borzelleca had known that the 1994 "final draft" of that same FASEB report would be rejected by the FDA and returned to FASEB for "clarification."

I'm inclined to tell you more about the work of Simon and Stevenson because they have so conscientiously represented the glutamate industry. In 1996, the newsletter of the NOMSG consumer group reported that when a monosodium glutamate-sensitive person responded to an advertisement in the *Los Angeles Times* for test subjects for a Scripps Clinic study, she was told that "1) If she feared her asthma reactions to be serious that she should not apply for the study; 2) that the person who was screening the applicants didn't believe that monosodium glutamate could cause asthma reactions; and 3) that this particular person was most likely responding to sulfites, and not to monosodium glutamate."<sup>125</sup> By this method, persons who were sensitive to monosodium glutamate were eliminated from participation in Scripps Clinic

studies of adverse reactions to monosodium glutamate.

On May 24, 1997, I wrote to Simon, asking him about work he and Stevenson might be doing for Ajinomoto or one of its agents, on the general subject of sensitivity to MSG.<sup>126</sup>

In a May 28, 1997 letter, Simon responded, saying, “There is no study that we are doing for Ajinomoto or one of their agents, on the general subjective sensitivity to MSG. The abstract presented at the February 1997 American Academy of Allergy, Asthma & Immunology (AAAAI) meetings was a preliminary report of an ongoing study we designed concerning MSG sensitivity in asthmatics.”<sup>127</sup> Quite to the contrary, however, the program for that AAAAI meeting included an abstract for a poster session, “The Role of Monosodium L-Glutamate (MSG) in Asthma: Does it Exist?” by Stevenson et al. funded by the IGTC.<sup>124</sup>

Others who stand out as loyal agents of Ajinomoto and the IGTC are Lloyd Filer and Lewis Stegink from the University of Iowa and their co-author W. Ann Reynolds, formerly at the University of Illinois. They, along with Richard Kenney and Richard Wurtman, not only produced IGTC-approved studies and participated in their workshops, but spoke out repeatedly about the safety of monosodium glutamate. Their work demonstrates both the glutamate industry’s power and the willingness of men, women, and medical facilities of considerable good reputation to cooperate in industry’s efforts to convince both professionals and consumers that MSG is safe.

### ***#3: Use a Variety of Strategies, Changing them From Time to Time***

To date, in promoting its products, the glutamate industry has focused on the safety of monosodium glutamate and the other ingredients that contain MSG. With safety as its focus or selling point, the glutes have employed five fairly distinct, creative strategies.

First, there’s research that claims to have demonstrated that the product, monosodium glutamate, is safe. More precisely, the claim associated with any single piece of research is that the study failed to produce any evidence that monosodium glutamate causes asthma or Chinese restaurant syndrome. All that glutamate industry researchers had to do to accomplish their goal was to look at the wrong thing, at the wrong time, in people who weren’t sensitive to MSG, and for good measure, lace placebos used in double-blind studies with aspartame. The propaganda people could then spin the story until it read that monosodium glutamate is safe.

Second, there’s suppression of information. When contradictory or embarrassing information has been published in books or journals, those in positions of power block media coverage. When criticism of glutamate industry research is offered for publication, editors refuse to publish those



critiques. When criticism of deceptive and misleading research reports is anticipated, researchers publish in journals that don't accept comment following publication.

Third is the dissemination of deceptive and/or misleading information. In the privacy of our own home, Jack and I sometimes refer to these as lies. Some are trivial. Some are not. All are designed to sell product. "Monosodium glutamate has been in use for over 2,000 years" is a statement you'll now rarely see, since we pointed out that monosodium glutamate was invented in 1908.<sup>8</sup> If you realize that asthma, migraine headaches, depression, and seizures are known to be triggered by MSG, the statement, "The reactions to monosodium glutamate are mild and transitory" takes on the characteristics of a bold-faced lie.

Fourth is the component we call "dirty tricks." We think of these as activities aimed at a particular person. Canceling airplane and hotel reservations made for attendance at a conference might be called a dirty trick. Interrupting service on our fax machine might be another.

Fifth is the glutamate industry's skill in marketing in general, and in lobbying both appointed and elected officials to follow its lead in proclaiming monosodium glutamate to be safe. The FDA, the National Institutes of Health (NIH), the EPA, the USDA, and the California Department of Pesticide Regulation are among those that appear to have been successfully lobbied.

#### ***#4: Change the Rules of the Game as Needed***

Over the years, while their mission to sell monosodium glutamate has remained the same, the glutamate industry's game plan has changed. In 1969, following Olney's demonstration that monosodium glutamate killed brain cells in the area of the arcuate nucleus of the hypothalamus, the glutamate industry sponsored animal studies that claimed to replicate the work of Olney and others, but didn't do so.<sup>6</sup> In the series of industry-sponsored studies that claimed to have found no damage caused by monosodium glutamate, researchers used animal subjects that differed from Olney's, waited to examine brain tissue until all traces of brain damage would have disappeared, offered analyses of brain tissue in areas outside of the arcuate nucleus, and used inappropriate methods for staining and examining brain tissue.

In the late 1970s, the neurotoxic effects of monosodium glutamate became undeniable. Neuroscientists were actually using monosodium glutamate as an ablative or provocative tool with which to selectively kill brain cells in order to study brain function and promote drug development.<sup>128,129</sup> Undaunted, those in the glutamate industry simply began to claim that animal research didn't speak to the toxicity of monosodium glutamate because research done on

animals didn't represent the human condition. The FDA never blinked an eye. Glutamate industry-sponsored human studies began in 1970 with work done by Morselli and Garattini<sup>130</sup> and Bazzano, D'Elia, and Olson.<sup>131</sup> These studies would appear to have been done in response to 1968 letters written to the *New England Journal of Medicine* discussing the reactions experienced by Dr. Ho Man Kwok following meals taken in a restaurant serving northern Chinese food. These and other glutamate industry-sponsored researchers produced studies which, they said, demonstrated that monosodium glutamate didn't cause adverse reactions. Some were double-blind studies that used aspartic acid (in aspartame) in placebos. All were flawed to the point of being fraudulent. All were studies on which the glutamate industry successfully bases its assertion that MSG is safe for human consumption. All were studies that the FDA has refused to challenge.

We anticipate that in the not too distant future, Ajinomoto will choose to direct attention away from its badly flawed human double-blind studies. No longer will the glutamate industry focus on the claim that essentially no one is sensitive to MSG. Instead, Ajinomoto and friends will agree to label MSG, and say that in so doing, they will prove that people who say they are sensitive to MSG are not really sensitive to MSG.

Ajinomoto has been laying the foundation for implementing this change in game plan for years. The strategy would be to **advertise** that the MSG in processed food would be labeled, without mentioning the fact that **some** MSG, **but not all** MSG, would be identified on product labels. The strategy would call for identification of MSG in processed food only if the amount of MSG in a given product was greater than the amount usually found in processed food.

Specifically, Ajinomoto would propose that ingredients containing 3 grams or more MSG per serving be labeled as containing MSG. From what we know about the content of MSG in processed food, we'd estimate that by labeling products that contained 3 grams or more MSG per serving, approximately 99 percent of the MSG in processed food would remain unidentified, because little, if any, processed food contains as much as 3 grams of MSG per serving.

Evidence of the FDA's cooperation in this endeavor will be found in FASEB's published Analysis of Adverse Reactions to Monosodium Glutamate (MSG),<sup>95</sup> and in the FDA's 1996 Advance Notice of Proposed Rulemaking.<sup>132</sup>

## 7 | **Scientific Fraud by Any Other Name Can't Be Prosecuted**

Long before we thought of looking to medical literature for information about MSG, Olney and others had proved beyond the shadow of a doubt that monosodium glutamate fed to young laboratory animals killed brain cells in the arcuate nucleus of the hypothalamus, a brain region that helps control endocrine function. In addition, Olney and others had demonstrated that monosodium glutamate fed to young laboratory animals subsequently caused behavior and endocrine disorders such as stunted growth, ADHD, obesity, and reproductive disorders.<sup>133,134,135,136,137,138,139,140,141</sup>



Fig. 3. A 9-month-old Swiss albino mouse (left) that was treated, as a newborn, with [monosodium glutamate] is shown beside the heaviest untreated male (right) from the same litter.<sup>142</sup> Reproduced with permission of the author.

At the same time, Lloyd Filer Jr., Lewis Stegink, Roy Pitkin, W. Ann Reynolds and others at the University of Iowa claimed to replicate Olney's work. However, they looked for brain lesions in areas where Olney hadn't found them; looked at animals that were too old to show that lesions had occurred; and used inappropriate methods for preservation and staining when dissecting brain tissue to look for lesions.<sup>143,144,145 146,147,148</sup>

In the 1970s, 1980s, and early 1990s, cooperation between individual researchers, universities and/or medical schools, government, and industry was openly acknowledged. When a study was published, a note told who sponsored the study. Thus, it was clearly stated that studies of monosodium glutamate safety from the University of Iowa College of Medicine and the University of Illinois Medical Center (where Reynolds was then on faculty) were financed and/or orchestrated by Ajinomoto, Gerber Products Company, G.D. Searle & Company (inventor of aspartame), the IGTC, and Searle Laboratories. Funding also came from various institutes of the NIH. The University of Iowa College of Medicine has a long history of cooperation with food and drug industry interests. In 1967, the Mead-Johnson Professorship in the Department of Pediatrics was established by the Mead-Johnson and Company Foundation, Inc., and Filer moved from Mead-Johnson (a producer of infant formula) to the University of Iowa College of Medicine, where he served as Mead-Johnson Professor from 1967 through 1977.<sup>149</sup> Filer remained a spokesman for the glutamate industry until his death.<sup>150</sup>

The allegiance of these people to the glutamate industry has been remarkable. In 1970, Filer chaired the National Academy of Sciences (NAS) subcommittee on Safety and Suitability of MSG and Other Substances in Baby Food, which issued the report, "Safety and Suitability of Monosodium Glutamate for Use in Baby Food."<sup>151</sup> At the time, the FDA was using the NAS to do its studies, much as it later used FASEB. Notwithstanding the fact that Olney had demonstrated that glutamic acid caused brain lesions and neuroendocrine disorders in laboratory animals, with infant animals being most at risk, Filer's subcommittee concluded, without reference to data, that glutamate was safe.<sup>151</sup>

Subsequently, the NAS committee was criticized. Most of its members were found to have close financial ties to the food industry. Chairman Filer, then Mead-Johnson Professor at the University of Iowa, was found to be receiving money from both the baby food and glutamate industries.<sup>152</sup>

Even before 1980, the toxic effects of monosodium glutamate were so well understood that researchers were using it as an ablative or provocative tool with which to kill brain cells in laboratory animals.<sup>128,129</sup> The treated animals would be studied by researchers interested in brain function, or involved in the development of pharmaceuticals to treat brain damage. The fact that monosodium glutamate causes brain lesions and neuroendocrine disorders in laboratory animals became undeniable. Never to be caught napping, Ajinomoto and friends set out to draw attention away from the toxicity of their product by quite simply proclaiming that animal studies don't represent the human condition. In addition, the IGTC began the systematic production of human studies that would fail to show a relationship between ingestion of monosodium glutamate and "Chinese restaurant syndrome." At the time, "Chinese restaurant syndrome" was the only adverse reaction the glutamate industry acknowledged might be caused by ingestion of monosodium glutamate.

Toward the end of the 1990s, I began to summarize the glutamate industry-sponsored human studies.<sup>8</sup> Although they were carried out by a variety of researchers at a variety of medical schools and universities, the essential elements of each study were the same. It was clear to me that the goal of each was to produce a study that failed to find a relationship between ingestion of monosodium glutamate and production of adverse reactions.

Step one would be to impress the reader with a sophisticated sounding “randomized, double-blind, placebo-controlled, multiple-challenge crossover design study,” or something equally impressive. Random selection of subjects is essential in studies that are to be generalized to the population from which subjects are drawn. But subjects in these studies were not randomly drawn. Subjects were always volunteers who claimed to be sensitive to monosodium glutamate, and there is nothing random about that. The only thing that was random was the order in which subjects receive the monosodium glutamate test material as opposed to the placebo. Consequently, not one of these industry-sponsored studies met the assumptions of the statistical tests used. So? So even if there were no other flaws in these studies, having failed to meet the assumptions on which the statistical tests were built, the IGTC-sponsored studies were meaningless.

As you might suspect, the studies had other flaws. It was claimed that subjects serving in these studies were self-selected MSG-sensitive people, but they were often students who were offered several hundred dollars to participate in a study (sometimes for just a couple of hours) only if they were (said they were) sensitive to MSG. Might not a graduate student be tempted to claim he was sensitive to MSG if his reward for spending 2-4 hours in an office would be a couple hundred dollars? No one verified that subjects were actually sensitive to MSG.

How do we know such things? Our daughter was a student on the Chicago campus of Northwestern University, where one of the studies was being conducted. There were flyers asking for subjects to participate in an MSG study hanging on bulletin boards everywhere, and she made an inquiry. She thought we might be interested.

Soliciting informed consent is a requirement of human research done in all universities and medical schools. Informed consent means subjects have been told what the study will entail, and agree to participate. In so doing, prospective subjects are given some indication of what the test is all about, and the procedures to which they'll be subjected. Do you think MSG-sensitive people would line up to join a study where they knew they were going to be fed monosodium glutamate? I wouldn't. Although those who sign up for these studies say they're sensitive to monosodium glutamate, it's doubtful all subjects are MSG-sensitive.

Most flaws won't be obvious. For example, IGTC researchers counted reactions only if they occurred within two hours following ingestion of monosodium glutamate, even though reactions to monosodium glutamate occur anywhere from immediately following ingestion to as much as 48 hours later. For years, the glutamate industry has broadcast the story that reactions to monosodium glutamate are mild and transitory, occurring (only occurring is the inference) between 10 minutes and an hour after ingestion. Neither the man on the street nor his physician would have any idea that the time allowed for collecting responses in these studies was inappropriate.

Headache, vomiting and nausea, diarrhea, abdominal pain and cramps, and change in mood quality or level represented 42% of the reactions reported to the FDA when its Adverse Reaction Monitoring System was compiling a list of reactions to MSG. Most of the industry-sponsored studies ignored these reactions, counting only numbness, tingling, and tightness associated with Chinese restaurant syndrome as recordable reactions.

The assertion that "a subject who reacts to placebo material as well as to monosodium glutamate test material is not sensitive to monosodium glutamate" is one of the fundamental fictions on which marketing "safe" monosodium glutamate is built. Think about it for a moment. Imagine that on one day a person is given a piece of licorice and breaks out in hives, and on another day the same person is given a piece of chocolate and breaks out in hives. Is the fact that a person given chocolate breaks out in hives evidence that licorice doesn't cause that person to similarly break out in hives? Of course not. But the glutamate industry claims that people who get migraine headaches after eating MSG aren't sensitive to it, because they also get migraines from ingesting some form of MSG and/or aspartame in something they call a "placebo." The IGTC actually set up a series of double-blind studies wherein subjects were given MSG in monosodium glutamate as test material and MSG-containing autolyzed yeast, hydrolyzed protein, and/or citric acid as well as aspartame in a placebo. The glutamate industry is so incredibly powerful within the FDA and the medical community that its creative (and misleading) research designs go unchallenged.

According to Ebert, the use of aspartame in placebos began in 1978<sup>27</sup> (before aspartame was approved by the FDA for use in food).

Over and above the fact that use of aspartame in placebos is grossly inappropriate, the fact that once approved for use, aspartame-containing products were supposed to carry a warning on their labels didn't deter the glutamate industry from using the substance, or the FDA from allowing its use. Aspartame contains phenylalanine (which adversely affects one in 15,000 Americans), aspartic acid (an excitatory amino acid) and a methyl ester. Aspartic acid and glutamic acid load on the same receptors in the brain;

cause the same brain damage and neuroendocrine disorders in experimental animals; and, with the exception of blindness related to aspartame ingestion, cause virtually the same adverse reactions in humans. There were more than 7,000 unsolicited reports of adverse reactions to aspartame filed with the FDA before the list was closed. It should surprise no one, therefore, that glutamate industry researchers find as many reactions following ingestion of an aspartame-containing placebo as they find following ingestion of monosodium glutamate test material.

By the time I'd completed my research, having reviewed all the IGTC-sponsored studies, I understood just how the IGTC produced study after study that found no association between ingestion of monosodium glutamate and adverse reactions. I'd observed that while a variety of researchers worked on the various studies, and the work was produced at different universities and medical schools, the designs of each study were essentially the same; only the details varied. While the flaws of each study could be dismissed as shoddy science, sloppy scholarship, or inadvertent error, taking the group of studies as a whole, it seemed to me there was clear intent to deceive the public about the safety of monosodium glutamate.

Intent to deceive? Could it be otherwise? Given the methodological flaws inherent in their work, and their unwillingness to change their protocols after those flaws were pointed out to them, we were drawn to the notion that it was with intent that IGTC researchers moved from a predetermined conclusion (that their product is "safe") to design and implementation of research guaranteed to bring readers back to that predetermined conclusion. We were reminded that the stated objective of the IGTC is to promote the sale of monosodium glutamate and that according to author Michael Crichton, in Japan, business is war.<sup>31</sup>

Jack and I have discussed the fact that there are some circles where deception with intent to deceive is defined as fraud. But with the FDA on their team, and without a whistleblower, there would seem to be no way to prove beyond a reasonable doubt that all of the flaws in glutamate industry research design and implementations are due to anything more than stupidity, ineptness, and/or sloppy research. We had already learned through painful experience that industry's power extends into the courts, and thus we decided it would be an exercise in futility to begin a discussion about glutamate industry fraud. So we didn't. And we don't.

For those who'd like an example of the glutamate industry-sponsored human studies, I recommend the one done by Tarasoff and Kelley of the Department of Chemistry, Faculty of Business & Technology, University of Western Sydney, Campbelltown, NSW, Australia.<sup>153</sup> I suggest it because my critique of the study<sup>76</sup> was published (after a year's dispute with the publisher and journal editors) and is readily available.

A later study by Geha et al.<sup>154,155,156</sup> is also noteworthy because during its course, it was brought to the attention of administration at Northwestern University Medical School (a study site) that aspartame (undeclared aspartame) was being used in placebos. At the time, Dean Nutter told me the administration wouldn't interfere in a study being conducted at the medical school. Nevertheless, the multi-center study, which also involved Harvard and UCLA, was halted and the placebo material ostensibly changed. The contents of the placebos, which were identified in the eventually published study, were noted only as "powdered beverage packets from the sponsor." Neither the use of aspartame nor a change in placebo ingredients is mentioned in the published study. The study, which was initiated in 1992, was published in 2000.

In 1990, I questioned research done by Goldschmiedt, Redfern, and Feldman<sup>157</sup> that used beef broth as a placebo for controls. In the U.S., you can't purchase commercially prepared beef broth that doesn't contain some form of MSG (hydrolyzed protein, yeast extract, textured vegetable protein, flavoring, etc.). I questioned the possible unwitting bias in placebo material in a letter to the editor of the *American Journal of Clinical Nutrition*. The letter wasn't published and no informative reply was received. I questioned Feldman about the contents of the placebo. He replied that he didn't know the content of the various materials used.

It had become clear the glutamate industry was having its way, and the fact that food additive monosodium glutamate caused brain lesions and endocrine disorders was being universally ignored. We'd tried to point out that it was really quite obvious that the endocrine systems of the still unborn and the very young were being damaged by MSG fed to infants in utero through their mothers' diets; by MSG ingested by nursing mothers and passed on to infants through their milk; by the MSG in infant formula (loaded with hydrolyzed proteins and other sources of MSG); and by the MSG in vaccines that would be mainlined to infants. But the glutamate industry has done its job well, so information stemming from the animal studies was, and still is, given no consideration. Even the obvious role played by endocrine disrupting MSG in the obesity epidemic, is being ignored.

Finally, we observed that when data don't support certain predetermined conclusions, researchers may draw conclusions that don't follow from the results of their studies. Moreover, if a glutamate industry-sponsored study really doesn't work out as desired, it might simply not be published. A study undertaken at the Medical College of Virginia by Donald Kirby, M.D. is an example of such "buried" research.<sup>158</sup>



## 8 | When Research, Even Badly Flawed Research, Isn't Enough

### SUPPRESSION OF INFORMATION

Consumer pressure to expose the toxic potential of MSG continued; the growing science on neurodegenerative disease continued to implicate glutamic acid; a growing number of diverse disease conditions were being linked to the glutamate cascade; and members of the U.S. Congress were privately admitting that they, personally, were sensitive to MSG. But industry-inspired articles attesting to the safety of MSG continued to be published by agents of the glutamate industry, and continued to receive coverage in the press while anything, or almost anything, that might have suggested MSG had toxic potential was ignored.

Ajinomoto and the IGTC maintain that their product, monosodium glutamate, poses no threat to humans. What about those who have different opinions?

Olney had a different opinion. He had published research to that effect in peer-reviewed journals throughout the 1970s.<sup>20</sup> In 1972, he testified before the Senate Select Committee on Nutrition and Human Needs that ingestion of MSG places humans at risk, with the greatest risk being for the very young. What happened to that information?

We learned about suppression of information firsthand when food editors of major newspapers with whom I'd established good relations started to refuse to talk to me. We learned more when an article that was supposed to cover a talk given by Dr. Russell Blaylock at the 1994 NOMSG convention in Chicago, focused, instead, on the wonders of monosodium glutamate.<sup>79</sup> Mention of MSG by major media sources has been virtually nonexistent since "60 Minutes" aired its story about MSG's toxic effects in 1991. Sometime after that program aired, Nancy Millman, writing as a freelance writer for the *Chicago Sun Times*, did an article focusing on Jack's activities and his efforts to have MSG labeled. According to Millman, prior to beginning her work, she'd cleared the story with her editor—but the article was never published.

Similarly, the *Baltimore Sun* accepted and then refused to print an article on MSG written by Linda Bonvie, and an editor at the *New York Times* told Bonvie she wouldn't take a story that even mentioned MSG. According to Bonvie, the editor said she was unwilling to face the pressure she knew would come if she

merely mentioned MSG in an article. In 1991, Don Hewett of “60 Minutes” said, on television, that he’d never had so much pressure applied to him by industry as he had prior to the airing of the MSG segment. Although rated by “TV Guide” as one of the two most watched “60 Minutes” segments of 1991, “60 Minutes” won’t touch another story about MSG. Just ask them!

Since 1991, little if any coverage outside of CNN and the Christian Broadcasting Network (CBN) has said anything other than that MSG-containing food is safe. The only coverage of a lawsuit filed by consumers against the FDA for failure to require appropriate labeling of MSG was carried by CNN, CBN, and the *St. Louis Post Dispatch* when the suit was filed, and by CBN and the *Post Dispatch* when the court’s decision was handed down.

In 1998, the *Washington Post* carried an article about monosodium glutamate by Robert L. Wolke<sup>159</sup> that might as well have come directly, instead of indirectly, from The Glutamate Association. Following its publication, I wrote to the editor of the *Washington Post*, detailing the bias in Wolke’s article, and several days later, found the following message from the *Post*’s Fanny Zollicoffer on my answering machine:

*about your “...letter to the editor about MSG, and the article we had in the food section. We’d like to publish your letter. It’s being considered for the free fall page on Saturday. And I’m just calling to confirm that you wrote the letter and put your name on it and sent it to no other newspaper.”*

When I called several days later to inquire why my letter hadn’t appeared in the paper, I was told the editors had decided not to print it.

There are other ways information can be suppressed. The glutamate industry suppresses information by drawing attention away from the truth (the information to be suppressed), and focusing, instead, on the trivial or untrue. Critics of the industry are disparaged or made the subject of jokes. (Critics don’t report adverse reactions, they “complain.”) Irrelevant information is given in response to serious questions about the safety of a product. (“If you eat too much of anything, you’ll get sick.”) Falsehoods are recited by alleged authorities. (“A blood-brain barrier prevents amino acids you eat from entering the brain.”)

Existing data may be distorted or trivialized. Every report of human suffering is labeled an anecdote and dismissed. Research misconduct, if detected, is excused as an error of judgment or sloppy work. The industry’s suppression of information, in all its many forms, is ignored by anyone with the authority to do anything about it. Finally, those in positions of power to do otherwise, ignore the fact that quantities of badly flawed research and repeated instances of direct suppression of information have contributed to the acceptance of

monosodium glutamate as a harmless food additive. Ours is a country where information, including data, can be suppressed without accountability.

When there's no getting around the fact that MSG causes adverse reactions, as is the case with migraine headaches, the glutamate industry and its colleagues at the FDA simply don't discuss those reactions. The FASEB, in a report done for the FDA and published July 1995,<sup>95</sup> covered the subject of asthma in some detail, but virtually ignored the subject of migraine headaches, despite the fact that 43 percent of the reactions reported to the FDA's Adverse Reactions Monitoring System by MSG-sensitive people (before the FDA stopped compiling reports of adverse reactions to MSG) were migraine headaches.<sup>160</sup>

Suppression of information implies there's information in existence that isn't communicated. Slightly different is the FDA policy of suppressing information by not providing it in the first place, i.e., not alerting people to things they might benefit from knowing. At one time, when consumers were relatively vocal about their sensitivities to MSG and aspartame, and the FDA found it prudent to demonstrate that "they were studying the matter" and keep records of reports from consumers who wrote that they'd experienced adverse reactions to MSG and/or aspartame. The FDA didn't solicit such reports from consumers. Neither did they announce, in any source commonly accessed by consumers, that such reports were being collected. It was only through efforts of consumer groups concerned with these neurotoxic amino acids that a few people were made aware of the collection sites and the fact that reports of reactions could be sent to the FDA.

The FDA's suppression of information doesn't stop with the toxic potential of MSG. We've found the FDA routinely suppresses information that might negatively impact the bottom lines of companies in the food or drug industries. Acid hydrolyzed proteins, for example, all contain carcinogenic mono and dichloro propanols. Have you seen any warning about ingesting acid hydrolyzed proteins? Has the FDA **done** anything to limit the carcinogens in acid hydrolyzed proteins?

Let me tell you something about hydrolyzed proteins. Most, if not all hydrolyzed proteins, are hydrolyzed using acids. Acids break down protein into individual amino acids (including glutamic acid) and unavoidable impurities, including carcinogenic mono and dichloro propanols.<sup>161</sup> Jack verbally advised the FDA in 1993 that acid hydrolyzed proteins introduced carcinogenic propanols into processed foods. He didn't realize the FDA was already aware of that fact.<sup>162</sup> The December 2, 1996 issue of *Food Chemical News* reported that, "The Food and Drug Administration is working with the hydrolyzed vegetable protein (HVP) industry to address its concerns about the presence of chloropropanols in acid-HVP." The article went on to report that, "Two chloropropanols...are considered genotoxic carcinogens by several international organizations,

according to FDA.” *Food Chemical News* went on to report that according to Greg Diachenko, director, Division of Product Manufacture and Use in the Center for Food Safety and Applied Nutrition’s Office of Premarket Approval, the “FDA has known about the formation of chloropropanols in HVP for some time, but its carcinogenic potential was not known until a few years ago.” (That would have been a few years before 1996.)

The Joint Food and Agriculture Organization of the United Nations (FAO/WHO) Expert Committee on Food Additives and Contaminants (JECFA) determined the carcinogenicity of chloropropanols at its 41<sup>st</sup> meeting, held in February 1993. Another key scientific body, the European Union’s Scientific Committee for Food, concluded that levels of 3-MCPD should be reduced to undetectable levels because it had been shown to cause cancer in rats when administered in large doses over long time periods.

To date, I’ve seen no warnings on labels of foods that contain acid hydrolyzed proteins, stating that those foods contain carcinogens. I call that suppression of information.

Suppression of information by professionals is not unknown. Suppression of criticism of badly flawed glutamate industry-sponsored research has been extraordinarily effective. Our questions, in the form of Letters to the Editor refuting articles by Goldschmiedt, Redfern, and Feldman,<sup>157</sup> and Daniels and Diachenko<sup>163</sup> have been refused publication by the *American Journal of Clinical Nutrition* and *Food Additives and Contaminants*.

When I sent a critique of the work of Tarasoff and Kelley<sup>153</sup> to *Food and Chemical Toxicology* as a Letter to the Editor, it was accepted for publication, but approximately seven weeks later I was informed that, “after reconsideration we cannot accept your comments on the paper by Tarasoff and Kelly for publication... Our concern is that your critique could be wrongly exploited by different groups of people involved in the MSG issue, and we therefore believe it is preferable that our journal should be kept away from any possible complications.”

I protested that having been accepted, I’d informed others that the letter was “in press,” and that in subsequently rejecting it, the journal was not only acting in an unprofessional manner, but costing me a great deal of embarrassment.

After considerable correspondence with the journal, *Bibra Toxicology International*, and Elsevier Science, I was informed that their battery of expensive solicitors had assured them that by publishing the letter, the damage to reputation, if any, had been sufficiently allayed.<sup>164</sup> My Letter to the Editor of *Food and Chemical Toxicology*<sup>76</sup> was published more than a year after publication of the original article.

In case you're looking for the big picture in all this, please note that Dr. Joseph Borzelleca, then editor of *Food and Chemical Toxicology*, was among those who told me the FDA wouldn't be accepting the 1994 Final Draft Report of the "independent" FASEB evaluation of the safety of MSG in food. Borzelleca told me he'd seen the report, and the glutamate industry wasn't pleased with it. Interesting, also, is the fact that Borzelleca was, at that time, on the faculty of the Medical College of Virginia, while Donald F. Kirby, M.D., was doing double-blind studies for the IGTC at the same institution.<sup>165</sup>

The mainstream medical community has been equally cooperative in suppressing information that might be of benefit to MSG-sensitive consumers. What physician, dietician or nutritionist will provide patients with the names of the ingredients in which MSG is hidden? We haven't bothered to track much of the glutamate industry influence, but, for example, it's on record as being generous in its support of the American Dietetic Association.<sup>166,167</sup>

Allergists are among those most vocal in their endorsements of the safety of MSG and in suppressing information that would say otherwise. They, as a group, refuse to consider that sensitivity to MSG is a reaction to a toxin/poison, not an IgE mediated allergic reaction,<sup>G</sup> and thus they test for MSG sensitivity with inappropriate allergy tests. If not purposefully deceptive and misleading, I consider allergy testing for MSG sensitivity at minimum a form of malpractice.

Endorsement is the other side of the coin. The American Academy of Family Physicians Foundation allowed the IFIC, which does work for the IGTC, to claim "Favorable Review by the American Academy of Family Physicians Foundation" on its 1991 brochure "What you should know about monosodium glutamate."

The bottom line? Interwoven with the assertion that research says monosodium glutamate is "safe," has been the suppression of virtually all commentary or data that would say otherwise. The FDA, the media and the medical community are essentially under glutamate industry control. The "virtually" comes from the fact that the glutamate industry doesn't yet have control of the Internet.

## **DISSEMINATION OF DECEPTIVE AND MISLEADING MISINFORMATION**

There's not much difference between endorsement of monosodium glutamate

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G - IgE-mediated food allergies are true food allergies involving an abnormal response of the immune system to one or more specific foods. These reactions are associated with the rapid onset of symptoms – usually within a few minutes to a few hours after the ingestion of the offending food. Immediate hypersensitivity reactions are mediated by an allergen-specific immunoglobulin E (IgE) antibody. The food allergens involved in IgE-mediated reactions are typically naturally occurring proteins in foods. In IgE-mediated food allergies, exposure to the allergen stimulates the production of allergen-specific IgE antibodies by plasma cells in susceptible individuals. (From <http://food.unl.edu/web/allergy/ige-mediated>—Accessed April 7, 2012).

and dissemination of deceptive and/or misleading information. Call it what you want, it's two sides of the same coin with the message on both sides telling consumers it's safe to buy products that contain monosodium glutamate.

The Glutamate Association and IGTC have disseminated masses of misinformation designed to play down reports of adverse or toxic reactions that might catch the eye of physicians or consumers. Their aim is to convince anyone who'll look or listen that monosodium glutamate is safe.

At first, we believed what Ajinomoto wanted us to believe: monosodium glutamate is a functional flavor enhancer with no side effects. We knew Jack reacted to the substance and he wasn't the only one to do so, but we had no idea there were many others like him. Having read nothing but propaganda provided by the glutamate industry, we believed only a few people reacted to monosodium glutamate; their reactions were mild and transitory; and it would take 5 grams of MSG to cause a reaction. We had no idea how much MSG there was in any product.

That was before 1989. In 1988, Dr. Schwartz had published *In Bad Taste: The MSG Syndrome*. In 1989, he and his wife, Kathleen, along with a group of grateful readers, had set up a consumer group aptly called NOMSG. By the end of 1989, Jack and I were members, and I'd begun reading everything I could find on the subject of monosodium glutamate. We were beginning to realize that not everything the glutamate industry told us was true.

First we learned that people vary in their sensitivities to monosodium glutamate and the other ingredients that contain processed (manufactured) free glutamic acid (MSG). Then we actually met a young lady whose reaction was worse than Jack's. She'd been an outstanding high school long distance runner, but in her final year, her migraine headaches became so severe that she'd been hospitalized, and she dropped to last place in competitions. The migraines were only part of the issue, as she became stroke-like, with paralysis on one side of her body. Her face on that side would become contorted, and her arm and leg would be contorted in a manner that you'd expect to see in a stroke patient. Recovery, although complete, took up to six months with considerable physical therapy. It was ultimately determined that her reactions were caused by exposure to monosodium glutamate.

As we researched Jack's problem, we began to note more and more discrepancies in the information put out by the glutamate industry. Monosodium glutamate, Ajinomoto said, was obviously safe. It had been used in food for over 2,000 years. But we read in the literature of The Glutamate Association and IGTC, both part of Ajinomoto's basic network, that monosodium glutamate was first manufactured in 1908. Hardly 2,000 years.

The more we read, the more discrepancies we discovered. Slowly, we began to identify the people who were endorsing the safety of monosodium glutamate and disseminating the glutamate industry's deceptive and misleading information. Much of our information came from the writings of The Glutamate Association and IGTC. In 1989 and 1990, they were pleased to brag about monosodium glutamate's endorsements, and cite information disseminated by individuals and organizations speaking in glowing terms about their wonderful product. By the time I published "The toxicity/safety of processed free glutamic acid (MSG): a study in suppression of information,"<sup>8</sup> I'd identified individuals, agencies, organizations, and so-called authoritative bodies that carried their messages of safety.

Some individuals and organizations with alleged interest in food safety reviewed the safety of MSG favorably. Some of their names will be familiar, while others will not: American College of Allergy and Immunology,<sup>168,169,170</sup> Institute of Food Technologists,<sup>171</sup> Mayo Clinic Nutrition Letter,<sup>172</sup> In Health,<sup>173</sup> Kristin McNutt,<sup>174</sup> Patricia Taliaferro,<sup>175</sup> Tufts University Diet and Nutrition Letter,<sup>176</sup> Modern Maturity,<sup>177</sup> and the University of California at Berkeley Wellness Letter.<sup>178,179</sup> Others prepared brochures stating there's no evidence that ingestion of monosodium glutamate or other MSG-containing food additives should cause consumers concern. The American Academy of Allergy and Immunology, the FDA in cooperation with IFIC, and the Scripps Clinic and Research Foundation produced brochures listing food additives that might cause consumers concern, while omitting any mention of MSG-containing ingredients.

Going a step farther, the AMA House of Delegates refused to implement Resolution 187, which was adopted at the AMA 1991 Annual Meeting (Policy 150.970, *AMA Policy Compendium, 1992 Edition*), which called for the AMA to "...encourage all appropriate regulatory agencies, including the Food and Drug Administration, to mandate labeling of all foods containing even small amounts of additive L-glutamic acid so that individuals wanting to avoid this substance may do so."

Depending on the roles they play, researchers might be considered agents of the glutamate industry. In addition, there are those who promote the products of those they work for, just as public relations firms do, but these organizations highlight the fact that they're nonprofit corporations, while minimizing the fact that they promote the products of those who employ them. The IFIC and the International Life Sciences Institute (ILSI) are examples of such glutamate industry agents.

Some of their information is based on distortion of fact. One example would be the statement that the glutamic acid in monosodium glutamate is chemically identical to the glutamic acid found in unadulterated protein. (The truth is that monosodium glutamate is a manufactured product that invariably contains

D-glutamic acid, pyroglutamic acid and other impurities as well as L-glutamic acid. The glutamic acid found in unadulterated protein is composed only of L-glutamic acid.)

One of their favorites over time has been the assertion that “other authoritative bodies” have found MSG to be safe. In general, those other authoritative bodies have read the FDA’s summaries concluding that MSG is safe, or have received selected data provided to them by The Glutamate Association and have called that their data. When questioned, Helen Keller International, one of the “authoritative bodies,” was not at all pleased to hear that its name was being used in this way. They had never considered that MSG might have toxic potential. Helen Keller International was supplementing monosodium glutamate, a widely used food additive, with vitamin A in Indonesia to counteract xerophthalmia, an eye disease caused by lack of vitamin A. It didn’t consider that to be an endorsement of the safety of MSG.

In 1991, faced with the threat of a “60 Minutes” segment scheduled to appear on CBS that might expose the toxic potential of monosodium glutamate, the IFIC’s MSG Committee/MSG Coalition stepped up its activity on behalf of the glutamate industry. The IFIC represents itself as an independent organization. It sends attractive brochures to dietitians, nutritionists, hospitals, schools, the media, and politicians, proclaiming the safety of monosodium glutamate. A person who chose to remain anonymous sent us a copy of the IFIC’s “Communication Plan: July-December, 1991” that detailed methods for scuttling the “60 Minutes” segment on MSG, or, failing that, provided for crisis management.<sup>180</sup> According to the *Encyclopedia of Associations*, the IFIC serves as a source of scientific information of food safety and nutrition; disseminates information to the media, the professional health community, and consumers; and seeks to foster the acceptance, growth, and development of MSG.<sup>181</sup> IFIC’s paid relationship to the glutamate industry is clearly documented.

The vehicles used to carry the glutamate industry’s messages include persons who might be able to influence people in high places (state or federal legislators, for example), press releases, reviews of the safety of monosodium glutamate placed in medical and nutrition journals, and speeches to nutrition and medical groups or any other group that might listen.

Information disseminated about the safety of monosodium glutamate is found in health letters (the University of California Berkeley Wellness Letter, for example); targeted journals (those focusing on women’s issues, children, food, sports, or nutrition, for example); The FDA Medical Bulletin (since discontinued); the FDA Backgrounder; the FDA Consumer; physicians’ journals; articles in newspapers, magazines and TV or propaganda about the safety of monosodium glutamate dressed up as news stories; websites of the IGTC, The Glutamate Association, the International Glutamate Information Service (one



of its affiliated organizations), individual agents or cooperating organizations; reviews in nutrition, nursing, and medical journals; and actual advertising.

Over the last two decades, the glutamate industry has distributed material designed to convince the public that MSG is safe. In 1989, when consumers raised questions about the safety of free glutamic acid, the FDA commonly referred consumers directly to The Glutamate Association or sent them material prepared by The Glutamate Association. In the past, FDA practice included distributing **unsolicited** copies of an *FDA Medical Bulletin* that assured physicians MSG is safe, and distributing similar material to food service people. In the January-February 2003 *FDA Consumer Magazine*, Michelle Meadows, in an article titled “MSG: A Common Flavor Enhancer,” spewed out words that give the appearance of having come directly from the IGTC, The Glutamate Association, or the International Glutamate Information Service—trying to convince consumers MSG is safe while really saying nothing.

We’ve found glutamate propaganda in the most interesting places. If you see an article in a magazine that praises monosodium glutamate or any other MSG-containing product, chances are there will be a paid advertisement from a producer or user of MSG on the same page. There are few medical journals any more that will carry the glutamate industry’s badly flawed research. Chances are if you come across a fairly recent article, it will be in a journal that sells advertising.

We’ve argued that published glutamate industry-sponsored studies are badly flawed. If that’s the case, their publication in peer-reviewed journals might be difficult to justify. Consider, however, that if the peers who review the work of glutamate industry representatives are themselves glutamate industry representatives, or very close friends, it’s akin to the “fox guarding the henhouse.” Consider also that journals such as the *Journal of Allergy and Clinical Immunology* take (or previously took) advertising, and journals such as the *American Journal of Clinical Nutrition* acknowledge the generous support of members of the food and/or drug industries. Both those journals have a history of publishing glutamate industry sponsored studies.

Glutamate industry representatives and friends sit on boards of “independent” organizations. I’ve already mentioned the role Ebert has played, and still plays, in this area. Glutamate industry researcher and spokesman Ronald Simon has been a member of the Scientific Advisory Board of the Center for Science in the Public Interest (CSPI). Monsanto’s Robert Shapiro sits, or sat, on the board of the Tufts University School of Nutrition. Allergy support groups often include industry-friendly allergists on their medical advisory boards. Steve Taylor has served on the Medical Advisory Board of The Food Allergy Network. (When last I inquired, The Food Allergy Network was not providing its members with lists

of the hidden sources of MSG.) Similarly, “independent organizations” whose medical advisory board members have ties to the glutamate industry have not provided information to their members about MSG-containing ingredients.

Glutamate industry involvement is rarely obvious. That’s what makes it so effective. An *InHealth* article<sup>173</sup> ran next to an advertisement from McCormick, a member of The Glutamate Association. Had the McCormick ad not been placed so close to the article, the possibility that McCormick might have commissioned the article might have escaped my notice. (Magazines often do stories about, or on behalf of, companies that purchase advertising.) Then there’s always congenial Andy Ebert, who doesn’t mention his ties to monosodium glutamate, Ajinomoto, the IGTC, and now aspartame (a.k.a. AminoSweet, Neotame, NutraSweet, Equal, and E951).

Much of the misinformation circulated by the glutamate industry comes in the form of half-truths. When The Glutamate Association’s Richard Cristol wrote to FASEB on April 9, 1993 that researchers had received no funding from The Glutamate Association, he didn’t rule out receipt of funding from the IGTC, Ajinomoto, Campbell’s or other members of the glutamate industry.

On page 5 of a brochure titled “Sweet, sour, salty, bitter and umami,” put out by the Umami Information Center,<sup>182</sup> the statement is made that “... researchers confirmed that glutamate had an L-configuration.” While it’s true that most glutamate has an L-configuration, it’s also true that when glutamate is generated through a manufacturing process or through fermentation, the glutamate produced will contain D-glutamate as well as L-glutamate; pyroglutamic acid will invariably accompany manufacture; and under certain circumstances, carcinogenic substances will also be generated.

Our favorite example of misinformation is Ajinomoto’s use of the concept of umami. What an idea! It’s common knowledge among those who work for the glutamate industry that there are receptors in the mouth and on the tongue called glutamate receptors—receptors that are stimulated by free glutamate. So hire a band of researchers to produce studies demonstrating that food containing free glutamate can stimulate those glutamate receptors, and announce to the world that they have discovered a fifth taste, called umami.

Never mind that for years, monosodium glutamate was described as a tasteless white crystalline powder. Never mind that famous chef Julia Child, who in her later years was recruited to praise the use of monosodium glutamate, never once mentioned monosodium glutamate in her original cookbook. Never mind that if there was taste associated with monosodium glutamate, people like Jack, who are sensitive to MSG, would be highly motivated to identify it and thereby avoid ingesting MSG—which they claim they can’t do.

I have this creeping suspicion that the concept of umami has been marketed in an effort to legitimize the use of monosodium glutamate in food, and draw attention away from the fact that the essence of monosodium glutamate is a neurotoxic amino acid (it kills brain cells) and an endocrine disruptor (it causes obesity and reproductive disorders) that causes reactions such as asthma, migraine headaches, seizures, depression, heart irregularities, irritable bowel, and hives.

I actually talked with one of the umami researchers. Our friend Sandy told me that a biochemist/nutritionist friend on the faculty at UC Davis could help me understand glutamate and monosodium glutamate, but when I called, the friend said he didn't have the expertise I was looking for, and he suggested I call Dr. Michael O'Mahoney, professor in the Department of Food Science and Technology, who was doing research for the glutamate industry and, therefore, could certainly help me.

O'Mahoney was warm and friendly, just like Taylor and Cristol had been earlier. He was sorry, he told me, but because he had a contract with Ajinomoto to study the taste of monosodium glutamate, he wasn't able to share information with me.

An academician who refused to share information was an animal I hadn't met before.

As this is being written, what seems to be the glutamate industry's favorite bit of misinformation is the statement that eating monosodium glutamate (which has L-glutamic acid in it) isn't any different than eating protein (which has L-glutamic acid in it). We call that fiction because it isn't true, and Ajinomoto knows it isn't true. Ajinomoto knows monosodium glutamate contains impurities that come as a consequence of being manufactured—and protein doesn't. How do we know they know? Because in the files of the FDA we found a 1994 letter from IGTC Chief Executive Officer Yoshi-hisa Sugita, citing a paper related to trace MSG impurities written by governmental scientists in the Central Customs Laboratory, Ministry of Finance of Japan<sup>13</sup> that says so. That shouldn't come as a surprise, because food-grade L-glutamic acid is sometimes defined as 98% pure.

Now, when professional journals hesitate to take articles from glutamate industry researchers, the IGTC holds seminars, and/or has researchers present their industry-friendly papers at professional meetings, following which abstracts of those papers are published. Abstracts are then picked up by the glutamate industry's propaganda teams and cited as studies published in peer reviewed journals, ignoring the fact that only abstracts were published, and the studies being reported on were not peer reviewed. One of the principal forums for such papers has been the *Journal of Allergy and Clinical*

*Immunology*. In addition, there are a few journals that, by policy, don't accept critical letters. *Food Additives and Contaminants* is (or was) one. Regardless of the venue used for publication of glutamate industry reviews or research, this information is made available to the medical community and the media, and assumes great propaganda value.

The potential for glutamate industry influence over the media is obvious. Radio, TV, and newspapers all carry food, drug, and cosmetic advertisements. Moreover, members of media boards of directors may also be directors of food and/or drug companies.

Whether or not these people and/or organizations act as agents of the glutamate industry or are simply influenced by them is irrelevant. Either way, they publish material that's read by others who respect their opinions, and that material is uncritical of anything said or done by the glutamate industry. Characteristic of those referenced here is their unwillingness to print any addition, correction, or retraction after errors or omissions in published material are pointed out to them.

The scientific community has been given information by the IGTC and The Glutamate Association, and through intermediaries such as IFIC and ILSI, is encouraged to pass it on to the public. Allergists, dieticians and nutritionists appear to have been particularly targeted. Further, the media appear to have been well supplied with glutamate industry materials and to be under tremendous pressure from food and drug advertisers to comment only positively about the value of monosodium glutamate, or not comment at all. IFIC claims that "some three out of four journalists [surveyed] said they use [the IFIC newsletter] *Food Insight* as background for news stories."<sup>183</sup>

## **DIRTY TRICKS**

Maybe they fall into the categories of suppression of information or dissemination of misinformation, but we prefer to call them dirty tricks. We think of suppression of information and dissemination of misinformation as being aimed at the general public; we take dirty tricks personally.

In October 1994, we formed the Truth in Labeling Campaign (TLC) to promote truth in labeling. Our first project was to secure full and clear labeling of MSG.

In August 1995, TLC sued the FDA and announced plans for fundraising. In October 1995, the *Washington Post* ran a story about an organization called the Truth in Food Labeling Campaign, formed by Public Voice for Food and Health Policy and the National Consumers League. According to the article, the purpose of the Truth in Food Labeling Campaign was to raise funds to combat the use of mechanically separated poultry (MSP).

How strange is that? Shortly after our group, Truth in Labeling Campaign, announces that we're going to be raising money for labeling MSG, a Truth in Food Labeling Campaign announces that it's going to raise funds to combat MSP.

"Truth in Labeling—MSG"

"Truth in Food Labeling—MSP"

We thought it was pretty funny, and an innocent coincidence—until the sponsors of the Truth in Food Labeling Campaign refused to reveal the source of the grant money given to them to set up the group, and wouldn't elaborate on projects planned for the future. Would someone have wanted to derail the fundraising efforts of the Truth in Labeling Campaign by forming this oh-so-similar-sounding organization?

To generate publicity for our lawsuit, TLC contracted with Bacons Communications to send out press releases announcing it. However, on the day following the agreed on distribution date, TLC began to get calls about receipt of incomplete information—received by fax—often only a cover page. As the number of inquiries grew, we confronted Bacons, and found our efforts to generate publicity had been purposely thwarted. It became clear the error wasn't due to a misunderstanding of instructions or equipment breakdown. After a little research, I found food and pharmaceutical companies were among Bacons' regular clients.

In 1994, I attended an IFT Short Course, "Allergies and other Adverse Reactions to Foods, Additives and Ingredients," sponsored by the IFT, The Food Allergy Center, and the University of Nebraska Food Processing Center. Presenters were IGTC spokesperson Daryl Altman, M.D.; Betty P. Rauch, M.B.A., Allerx Inc.; Daniel J. Skrypec, Ph.D., Kraft General Foods; and Sean F. Altekruze, D.V.M., M.P.H., FDA. To my amazement, very little was said about MSG as a trigger of adverse reactions, and what was said was essentially accurate. It was only after the presentation that I discovered that prior to it, Dr. Altman had given members of the press alleged "copies of the presentation" that were replete with misinformation about the safety of MSG. Altman had suggested that reporters didn't need to attend the actual session.

In a letter dated May 28, 1991, the FDA's Dr. Shank cited my letter of December 30, 1990 to FDA Commissioner David Kessler, significantly distorting its text and accusing me of actions I hadn't taken. In September 1995, Dr. Roland Auer wrote to Jack, citing a letter he'd written, significantly distorting its text and accusing him of saying things he hadn't said. Were these distortions set up for some purpose? Were we supposed to be angry and say things we'd later regret? Were we supposed to sue Shank or Auer? Were we supposed to be frightened? Or were they just planning for the future: putting something false

into print, and then, if needed later for propaganda purposes, being prepared to quote it as though it were true?

I've already mentioned that those doing research for the IGTC used aspartic acid (in aspartame) in their placebos. In anticipation of (or response to) criticism, those in the glutamate industry offered that anyone who'd like to check out the contents of their placebos would be welcome to come to one of their test sites and take a sample placebo from the placebos set aside to allay such concerns.

Generous as it might seem at first reading, this offer actually gives me great cause for concern. Where I come from, a "sample" would be something randomly drawn from a population, and therefore, representative of it. Placebos "set aside" by people who conduct research when components of placebos are in question don't meet anyone's criterion for a randomly drawn sample. Might "set aside placebos" be a dirty trick?

Is a fax machine that falters only when material pertaining to the toxicity of MSG is being transmitted a dirty trick? Given that wire-tapping technology 20 years ago wasn't what it is today, it could have been that our fax line was tapped. Is it a dirty trick to lie about the nature and severity of MSG reactions? Is it a dirty trick to tell people who might be MSG sensitive to get tested by an allergist when you know the reaction to MSG is a sensitivity reaction, and no traditional allergy test will identify it?

Whatever you call them, we've seen many. And I suspect we haven't noticed them all.

Most fun was the fax machine. I don't remember what our project was at the time, but along with faxing things to our children and our accountant, we were faxing information of one sort or another to people who were interested in the safety/toxicity of MSG. While the fax seemed to work most of the time, when I'd send a document that had something to do with MSG, or someone would fax a similar document to me, the machine would do a few pages and then stop. I finally got so annoyed that I carried the machine down the hill to a shop where it could be repaired. "Sorry lady," the repairman said, "I can't fix it 'cause it isn't broken."

## **MARKETING/LOBBYING**

According to the American Marketing Association, "Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large."<sup>184</sup> When applied by the glutamate industry, it appears that value for customers, clients, partners, and society is defined as activity that leads to the purchase of products that contain MSG.

According to the Free Dictionary, lobbying is “The process of influencing public and government policy at all levels: federal, state, and local.”<sup>185</sup>

I think of badly flawed research, suppression of information, dissemination of misinformation, and dirty tricks as parts of the glutamate industry’s marketing package. From what we’ve heard from legislators, it would appear that the message carried to them that MSG is a harmless food additive is built on the components of such a marketing package.





## **9 | The Fail-Safe for Hiding MSG: 3 Grams of MSG**

The genius of Ajinomoto is nowhere better illustrated than in the development of the 3 gram MSG labeling strategy.

Review of analyses of amounts of MSG in processed foods suggests that half a gram will trigger reactions in most people who are MSG-sensitive. There were a number of independent analyses done some years ago on canned soups which are notorious for causing MSG reactions. Most contained about .6 grams of processed free glutamic acid (MSG) per serving; but none contained as much as 1 gram. Moreover, the label on Accent brand monosodium glutamate states (or stated) that one serving of pure monosodium glutamate is .5 grams of monosodium glutamate (of which a lesser amount would be MSG).

How much processed free glutamic acid (MSG) does it take to cause an adverse reaction? No one knows, because no one's done a systematic study to provide that information. We do know from published reports of adverse reactions that as little as .5 grams of MSG can trigger adverse reactions. We also know that some MSG-sensitive people react to the minute amounts of processed free glutamic acid found in binders and fillers of pharmaceuticals—in ingredients with names like maltodextrin and cornstarch. The fact remains that no study to determine the least amount of MSG that will cause a reaction has ever been done.

At the end of the 20th century, the safety of monosodium glutamate was being seriously challenged. The use of aspartame in placebos used in glutamate industry double-blind studies had been exposed, and increasing numbers of consumers were stating that they suffered adverse reactions following ingestion of MSG. Might the glutamate industry be worried? What if someone of stature who had the ear of major media—someone not influenced by the largess of the glutamate industry or friends at Monsanto—spoke out about the toxic effects of MSG, and this information could no longer be effectively suppressed? What if an insider, a whistleblower, came forward?

What if? Not to worry. The glutamate industry's plan to deal with such an eventuality had been set in motion years ago. No longer would industry focus on the claim that essentially no one is sensitive to MSG. Instead, Ajinomoto and friends would agree to labeling some MSG, but not all MSG. Specifically, the MSG in any ingredient or product that contained less than 3 grams of MSG wouldn't be identified on product labels. The claim would be made by the

glutamate industry that MSG was being identified on product labels, while most of the MSG in processed food would go unidentified. By using 3 grams as a basis for labeling, most MSG would remain hidden. Labeling some but not all MSG would cause more confusion than benefit to consumers.

It may have been the work of David Allen, M.D. that first suggested to the glutes that 3.0 grams would be a convenient figure to use as a cutoff point for labeling MSG. Allen had found that 2.5 grams of MSG could trigger asthma, and had published his findings in a peer-reviewed journal.<sup>186</sup> Subsequently, that research (demonstrating that 2.5 grams of MSG **could cause an adverse reaction**) would be cited by the glutamate industry as demonstration of the “fact” that 3 grams or more MSG **would be needed to cause an adverse reaction**.

The glutamate industry, however, had a problem with using Allen’s research results, for Allen had also found that .5 grams of MSG could trigger asthma—and if that information surfaced, it could kill the 3-gram strategy. So what would Ajinomoto do?

## STRATEGY

...1. **Cite** just that section of Allen’s peer-reviewed published study where he reported that 2.5 grams of MSG could trigger asthma.<sup>H</sup> Do not mention the fact that Allen also found that .5 grams of MSG could trigger asthma.

...2. **Establish** a 3-gram figure as **the** amount—the least amount—of MSG required to cause an MSG reaction as opposed to **an** amount of MSG that would cause an MSG reaction—obscuring the fact that adverse reactions occur following ingestion of less than 3 grams MSG.

...3. **Discredit Allen**. Once the 3-gram figure was established as **the** amount that would cause an MSG reaction, the research reported by Dr. Allen would be discredited—just in case someone should later refer to the fact that he’d found that .5 grams of MSG could also cause a reaction.

## IMPLEMENTATION

### *The FDA’s 1995 FASEB Report*

After the 1994 final report of the “independent study” done for the FDA by FASEB had been found to be inadequate by the IGTC, the FDA had returned what it now called the “draft final report” to FASEB “for clarification.” The final

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H - Allen actually found that 2.5 grams of MSG would trigger MSG reactions in some people; and in discussion cited earlier work by Schaumburg et al. as having found that 3 grams of MSG could trigger Chinese Restaurant Syndrome.

report, published in 1995, told us that “clarification” included conveying the information that it would take **2.5 grams MSG or more** to produce an MSG reaction. When finally published in 1995, the FASEB report on the safety of monosodium glutamate in food read, in part:

*“Despite the fragmented and limited data available, the Expert Panel concluded that there appears to be a subgroup of as yet not fully characterized asthmatic patients that may respond to oral challenges of doses of MSG that exceed 2.5 g per challenge.”<sup>95</sup>*

This FDA move to cooperate with the glutamate industry was not without precedent. In 1978, the glutamate industry had found a study of the Select Committee on GRAS Substances (Evaluation of the Health Aspects of Certain Glutamates as a Food Ingredient) done for the FDA by FASEB<sup>187</sup> to be similarly unacceptable. In response, Ajinomoto and friends had convened a symposium in Milan, Italy, submitted the Milan research reports (primarily glutamate industry sponsored) to the FDA, and had the 1978 FASEB/FDA report rewritten.<sup>188</sup>

### ***The FDA’s Advanced Notice of Proposed Rulemaking***

Following publication of the 1995 FASEB report, the FDA published an Advanced Notice of Proposed Rulemaking (ANPR), citing the 1995 FASEB report as justification for labeling MSG. The extent of FDA/industry cooperation can again be seen in the FDA’s substitution of 3 grams or more MSG needed to cause an adverse reaction for the lesser amount (2.5 grams) published in 1995 by FASEB.

*“SUMMARY: The Food and Drug Administration (FDA) is considering establishing requirements for label information about the free glutamate content of foods. The recent finding of the Federation of American Societies for Experimental Biology (FASEB) that oral ingestion of 3 or more grams (g) of monosodium glutamate (MSG) without food can cause adverse reactions in certain otherwise healthy individuals has prompted the agency to consider what action is necessary to protect consumers from inadvertently ingesting levels of MSG or other forms of free glutamate that could cause an adverse reactions. Thus, the agency seeks public comment...”<sup>189</sup>*

The ANPR was not a proposed rule. It was an announcement asking for comments on whether there should be a proposed rule—an announcement made to demonstrate to the judge hearing our law suit (Truth in Labeling Campaign, et al., Plaintiffs vs. Donna Shalala, et al., Defendants) that the FDA was evaluating the need to label MSG. While the ANPR docket (96N-0244) remained open, input to the ANPR would not be evaluated, i.e., no action

would be considered by the FDA. With the court's decision to defer to the FDA on the matter of labeling MSG, the FDA dropped much of its pretense of considering labeling. According to a conversation with Dockets Management on January 5, 2009, the ANPR was withdrawn in 2004.

A July 21, 2003 letter from The Glutamate Association to the FDA Dockets Management illustrates the way in which the glutamate people reinforced the deceptive and misleading statements made on their behalf by the FDA. That letter reads in part:

*"The [1996] ANPR was prompted, in significant part, by FDA's interpretation of a 1995 report of the Life Sciences Research Office (LSRO) of the Federation of American Societies for Experimental Biology (FASEB) concerning the safety of [monosodium glutamate] and other glutamate-containing ingredients. FDA interpreted the report to support a conclusion that certain sensitive individuals may experience adverse reactions following the administration of a bolus dose of 3 grams of MSG in a fasting state."<sup>190</sup>*

Never is it mentioned that .5 grams MSG has been shown to cause an asthmatic reaction.

### ***Discrediting the Work of Allen***

The work of discrediting Allen was left to Simon and Stevenson of Scripps Clinic, La Jolla, California. Details will be found in Chapter 6.

## 10 | **Your FDA: Guardian of the Glutamate Industry**

*"A complicating factor in [FDA] evaluation of MSG and glutamates has arisen because a few individuals have very openly questioned the motives and competencies of FDA to provide for the proper scientific review and regulation of this substance....In the past, we have been better able to control the issues we chose to address and the timing."*

-- Dr. Fred R. Shank, director of FDA's Center for Food Safety and Applied Nutrition, *Food Chemical News*, July 29, 1991, p.25

*"It's not that the public is dumb," Shank said. "They need education. We have to find out how to give it to them."*

-- *Food Chemical News*, October 28, 1991, p.39

*"If the outcome of the review raises substantive questions about the safety of MSG, FDA will require industry to conduct studies to resolve the questions" [Shank] said.*

-- *Food Chemical News*, April 20, 1992, p.41

*"The FDA's findings were based on the scientific studies provided by the Glutamate Association, according to David Hattan, Ph.D., deputy director for the division of toxicological review and evaluation at the FDA. 'The work has been supported by people with an interest in glutamate: consortiums and manufacturers,' he says."*

-- *Journal of Dental Hygiene*, May, 1992, p.158

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Since 1989, much of our time has been spent in an attempt to have MSG identified wherever and whenever it appears in processed food. We're still working on it.

It's hard to imagine that a mere 20 years ago, we thought the FDA looked out for the interests of consumers, guaranteeing them safe food, drink and pharmaceuticals. Today, we understand the FDA is nothing more than an extension of industry, promoting the welfare of big business while paying lip service to protecting consumers.

When we looked back, neither of us could believe how naïve we were. How for years we gave them the benefit of the doubt. How at every opportunity

we gave them the chance to say “we were wrong” or “we were negligent” or “we didn’t realize...” But they didn’t. It took Jack nearly 20 years to admit that one of the greatest hoaxes played on the American people is the FDA, and the people we elect to public office—Democrats, independents, and Republicans alike—enable them. To the end, Jack had trouble admitting that the evil permeating the FDA permeates a large part of society. He resisted admitting it, even when he knew it was true.

It’s the FDA that determines whether monosodium glutamate or any other chemical will be approved for use in food, in whole or with restrictions. It’s the FDA that holds the key to changing a product’s status. The FDA also holds the keys to life and death for many Americans, some of whom still believe it’s their welfare, not the profits of the food and/or drug industries, that concerns the FDA. The FDA’s refusal to require that all MSG in processed food be identified on product labels made it extremely difficult for Jack to live. Actually, the FDA’s refusal to require that all MSG in processed food, pharmaceuticals, and dietary supplements be identified on product labels made it impossible for Jack to stay alive.

My first contact with the FDA came in 1989, when Jack, with other MSG-sensitive people, testified before a committee taking input relevant to the proposed National Education and Labeling Act (NLEA). It was there that we met Barbara Mullarkey, who’d introduce us to the Nutrition for Optimal Health Association (NOHA) and the FDA’s Adverse Reactions Monitoring System (ARMS).

At one time, ARMS was managed by Rear Admiral Linda Tollefson. In the 1990s, her job included collecting unsolicited reports of adverse reactions to MSG and aspartame. The 1997 reports, which I believe were ARMS’ last MSG and aspartame reports, indicated there had been 7,259 reports of reactions to aspartame,<sup>191</sup> and 717 reports of adverse reactions to MSG.<sup>160</sup> Tollefson’s job didn’t include soliciting reports of adverse reactions to MSG or aspartame.<sup>192</sup>

Since reading the studies done by Olney and others, I had understood that the processed (manufactured) free glutamic acid (MSG) found in monosodium glutamate and the aspartic acid found in the sugar substitute aspartame were neurotoxic amino acids that killed brain cells in the area of the hypothalamus when fed to the very young. In reading the lists of adverse reactions compiled by ARMS,<sup>160,191</sup> I came to realize that the adverse reactions listed for monosodium glutamate were not only essentially the same as those listed for aspartame, but occurred with the same relative frequency. Migraine headaches were the most frequently reported reaction for both monosodium glutamate and aspartame, with gastric-related problems being second.

At one point, Jack wrote to then FDA commissioner Dr. David Kessler pointing out that his reactions to MSG were life threatening. Sometime later, Jack received a call from Cheryl, an FDA employee, indicating that she'd been assigned to look into his reported life-threatening sensitivity to MSG. Cheryl wished to schedule a visit.

At the time, Jack was still traveling for business, and suggested setting an appointment for a time in the future. That seemed to upset the FDA investigator, for she became rude, commenting that she didn't know why she was being asked to do such a review, because it was clear MSG was safe.

Jack must have challenged Cheryl's rudeness, because she apologized. She was sorry for being short with him. Her daughter had recently developed some strange undiagnosed condition, and from time to time was rushed to the emergency room from school. She was calling from the hospital.

Jack being Jack, thought Cheryl might feel better if they just chatted a few minutes. Besides, he was always interested in ascertaining if an undiagnosed illness could be related to ingestion of MSG. It wasn't long before Jack determined that Cheryl's daughter's problem was likely induced by MSG.

Was there any pattern to these occurrences? "Yes," she said, "there was a pattern." On many evenings her daughter went out with the girls, and the previous evening she'd gone out for pizza, as she often did the night preceding an "attack."

What kind of pizza? "Always sausage pizza." Sausage pizza? Sausage pizza, at least in Chicago, typically contains monosodium glutamate or ingredients like autolyzed yeast and natural flavoring that contain hidden MSG. Jack suggested Cheryl's daughter might have the same problem he had, and offered to mail information, including a list of the ingredients in which MSG could be hidden, and the types of food in which MSG would most commonly be found.

Eventually Cheryl came to Jack's office for his scheduled interview, and quite naturally, Jack asked how her daughter was doing.

"Fine and thank you for asking," came the response. Then, without warning, she blurted out, "Mr. Samuels, you were right. My daughter is MSG sensitive. As long as she stays away from MSG, she doesn't have these reactions. This report, your medical report, has to be very strong because something has to be done about this," and Cheryl proceeded to take Jack's comments.

Jack heard from Cheryl again several weeks later. She told him she'd visited his family physician, who was acutely aware of his MSG problem. She told Jack his physician had told her he'd been monitoring Jack's stress test when Jack had collapsed. For breakfast, Jack had eaten cereal that contained a very small

amount of MSG. Cheryl also told Jack that she'd completed her report, and because of the importance of the issue, she wanted Jack to review it to make sure she hadn't missed or misstated anything.

Jack presented the edited report to Cheryl when they next met. "This is exactly how it will go in," Cheryl said. "This has to be a very strong report."

Sometime later, Jack dropped in to the FDA to visit Dr. Linda Tollefson. Jack had wanted to talk to her, but had never been able to reach her. He wanted to confront her with the fact that every time we wrote to her on an issue related to MSG, her responses would be unrelated to our letters. Finding it impossible to set up a meeting, he simply decided to drop by.

Jack had never gone to the FDA uninvited, and had failed to consider that an invitation might be required. He found, however, that he could easily secure a pass to the second floor library, take an elevator to the second floor, and continue on to the basement where he knew he could find Tollefson. Since Tollefson had no secretary, he just walked into her office and introduced himself.

"I'd just like to talk with you and say a few things," was what Jack said to a shocked Linda Tollefson, who apparently knew who Jack was before he told her.

"Dr. Tollefson, you keep saying that no one reacts to MSG. Are you prepared to tell me that the report done by one of your employees indicated that I'm not MSG sensitive?"

"Absolutely," she replied, "and in fact your doctor doesn't think you're MSG sensitive either."

"That's a lie," Jack responded, at which time Tollefson ran from the room, slamming the door. If her statement was accurate, Cheryl's report had been changed between the time Jack had seen it and the time it had gotten to Tollefson's desk—just like the minutes of Jack's 1989 meeting with the FDA in Washington had been changed.

Tollefson could have worked directly, instead of indirectly, for industry. Friends who believed aspartame should be pulled from the market advised us that they'd also attempted to talk with Tollefson, who always greeted them with a can of diet soda in hand. Moreover, while she seemed to listen, she never did more than listen to their words and, in turn, explain that aspartame was harmless.

I wrote to FDA Commissioner Kessler at the time, asking that Tollefson be released from her position since she was serving the industry, not consumers. In reply, I was told Tollefson was a faithful servant of the FDA (which I read as "the FDA and the glutamate industry"), and our accusations were unfounded.



Eventually, Tollefson was moved from ARMS and promoted to another position within the agency. As this is being written, Rear Admiral Tollefson is director of the FDA Regional Office in Europe and is stationed at the U.S. Mission to the European Union in Brussels, where she's responsible for all FDA operations in Europe. I often wonder what messages she carries about the safety of aspartame (AminoSweet/Neotame) and MSG.

Our friend Barbara Mullarkey had studied the reports prepared by Tollefson, and noted a relatively large number of reactions reported in a category titled "other." Barbara filed a Freedom of Information (FOI) request for detail of the category "other," and discovered that four deaths attributed to ingestion of aspartame had been sequestered under "other." "The Ultimate Other," Barbara called it in an article she wrote.

Toward the end of the 1990s, collection of reports on adverse events triggered by aspartame was discontinued. Barbara told us an FDA employee told her it really wasn't necessary to bother the FDA with additional reports of aspartame sensitivity because the FDA knew aspartame was safe. A collection of reports on MSG reactions was similarly discontinued.

A friend and NOHA member who lived near us had an experience similar to the experience Jack had. Her daughter had such severe asthma attacks that she'd been hospitalized a number of times, and, in fact, had almost died on several occasions. The mother had determined that the asthma attacks always followed exposure to MSG, and she was deathly afraid of letting the child eat outside of their home. After one attack, she'd been so upset that she wrote a nasty letter to FDA Commissioner Kessler, decrying the fact that the FDA's inaction was placing her daughter at risk. After sending the letter, she called Jack, and in a trembling voice, said, "I think I did a terrible thing. I wrote this nasty letter while I was really upset and I'm afraid now that I'm going to get in trouble for what I said."

It was not long after that letter was written that an FDA investigator both visited the family and interviewed the child's physician. As Jack recalled, the investigator spent three days doing his review, after which our friend called Jack and said, "You'll be so pleased. This man was very polite and he did in fact visit my physician, and when he finished his review he stopped by the house to again thank me for my cooperation; told me I'd be very pleased, because he found that without question my daughter was MSG sensitive and it was a serious matter; and the report would go in accordingly." Jack told our friend that based on past experience, he found it hard to believe that there would be a report confirming her daughter's asthma was caused by MSG. Jack suggested she wait a month or two and make a FOI request for a copy of the report.

Several months had gone by when Jack received a call from an extremely angry woman. She'd done what Jack suggested, and had received the report, which stated her daughter wasn't reacting to MSG. The report said there was a lot of dust in the house and the asthma was likely the result of poor housekeeping.

As our understanding of the FDA grew, we became aware that in addition to ARMS, the FDA had a Food Advisory Committee in which we should be interested. Jack was still working when notice came that the FDA was putting together this committee and two of its positions would be occupied by non-industry, non-scientist individuals.

Someone, whose name escapes me, entered Jack's name for one of the consumer positions. He filled out an application after getting some information from Jack, who was happy to cooperate.

Quite a while later, Jack received a call from a man who introduced himself as an FDA employee. Nate said he'd been assigned to determine if Jack's qualifications fit the requirements for this advisory committee position, but he was in Milwaukee and very busy, so he really didn't want to drive to Chicago to waste his time interviewing Jack. Nate wanted Jack to know that he likely didn't meet the requirements for the position and Nate wasn't going to proceed with his application.

When it was Jack's turn to speak, he asked what was required of a candidate, and Nate told Jack they needed someone who could understand scientific terms. In response, Jack suggested that since he was a science major at Northwestern University and held an advanced degree in hospital administration, including work in public health and science, his understanding of scientific terms should be more than satisfactory.

"But we need someone who can communicate well with physicians and other people in science," Nate said, to which Jack responded that as an administrator who'd successfully operated hospitals, he wouldn't have been successful if he hadn't been able to communicate with physicians.

"Well, the person has to be able to read reports regarding scientific matters and understand them," Nate said, to which Jack simply replied, "I guess you don't understand what hospital administrators do and the training they have."

"OK," said Nate, "I'll put in the report of this interview."

Jack didn't hear from the FDA about the Food Advisory Committee, but did eventually see it announced that appointments to the FDA Food Advisory Committee had been made. The two positions had been filled by IGTC president Ebert, and an Evanston, Illinois woman nutritionist who traveled the

country as a representative of the IGTC to advise people that MSG is safe.

Jack did two things. First, he applied to FOI for the curriculum vitae of all the people who'd applied for the committee. Interestingly enough, there was no paperwork for Jack, and when he questioned the absence of his application, he was told that since paperwork for Jack Samuels didn't exist, he must not have applied.

Second, he wrote a letter to FDA Commissioner Kessler protesting both the destruction of his application and the appointment of the chairman of the IGTC, a trade organization representing the glutamate industry, to a position ostensibly set aside for a consumer advocate. Jack received no reply.

FDA Commissioner Kessler had an interesting management style. He never responded to letters from consumers. When Jack wrote to him directly, he had someone else reply. Lawrence Lin, Ph.D. was evidently assigned to respond to Jack's phone calls and mail, placate him, and keep him off of everyone else's back.

Jack's first response from Lin demonstrated Lin's ignorance of MSG. Jack wrote Kessler accordingly, suggesting that if he was going to assign someone to correspond with him, it would be appreciated if that someone knew what he was talking about.

In the early 1990s Jack had a great deal to say to Kessler, and Lin responded to all of it. Jack would tell you that over time they became friends, because Lin certainly did appear to care about Jack's welfare. I'll tell you that Lin was simply doing his job as directed: dealing with Jack so no one else had to. I think of Lin like so many others: doing what he was told, staying out of trouble at the FDA, and thereby keeping his job.

The FDA's David Hattan, Ph.D. played a different role. Hattan wasn't charged with placating us. His role was much more important; it appeared to us that he was to represent the interests of the glutamate industry without necessarily appearing to do so. I think Jack was being generous when he said he considered Hattan to be intellectually dishonest.

Hattan knew full well that MSG was neurotoxic and caused adverse reactions. In August 1990, he told a toxicology forum in Aspen, Col. that glutamic acid was implicated in a number of disease conditions. According to Hattan, "developing data on exogenous and endogenous excitogens or excitotoxins has been the primary spur to the FDA's review of monosodium glutamate." Hattan had noted the similarity of domoic acid (which as a contaminant in Canadian mussels led to 12 permanent losses of memory and three deaths), and glutamate, and was quoted as saying, "It has been theorized that if chronic

exposure to environmental excitotoxins can cause neuronal degeneration that is gradually manifested across months or years, it may be possible for natural or endogenous excitatory neurotransmitters like glutamic acid to mediate neuronal degeneration in the central nervous system through some type of slow, possibly accumulative, process.”

In May 1992, the *Journal of Dental Hygiene* cited Hattan saying, “The FDA’s findings were based on the scientific studies provided by The Glutamate Association. The work has been supported by people with an interest in glutamate: consortiums and manufacturers.”

In 1993, Hattan, then FDA Deputy Director for the Division of Toxicological Review and Evaluation, was FDA liaison to the FASEB study on the safety of monosodium glutamate in food, a position from which he defended the assertion that MSG is safe for human consumption. The discrepancy between Hattan’s earlier statements (1990 and 1992) and the role he played during the FASEB study were reminiscent of researchers Auer and Kenney, who first found that monosodium glutamate might have toxic potential, and subsequently proclaimed that it was safe.

Once Hattan assumed the role of FDA/FASEB liaison, any questions he might have had about the toxic potential of MSG disappeared, or at least disappeared from sight. At the end of 1992, it appeared that Hattan was an officer in the army assigned to keep MSG hidden in food, and keep the milk in the glutamate industry’s cash cow flowing. We thought it very likely that he was taking orders from someone who ranked higher than he did in the FDA/industry army.

Over the years, Jack met personally with three FDA commissioners or acting commissioners and corresponded with acting Commissioner Bill Benson who was, in Jack’s opinion, the most responsive. Jack also got to know the head of the Center for Food Safety and Applied Nutrition. Every time they met, they’d have cordial discussions. At one time, Jack was invited to Dr. Shank’s office, and he brought along a bottle of Bragg’s Aminos. For years, this product had prominently displayed the words “No MSG” on the label, when in fact it was nothing more than hydrolyzed soy protein, which would invariably contain processed free glutamic acid (MSG). Shank looked at the label and laughed. “Jack, you’re wasting your time. You know we’re not going to do anything about this.”

Commissioners, acting commissioners and department heads; all were cordial—and all were beholden to the glutamate industry.

As previously noted, while in Washington to give testimony to the FASEB Expert Panel evaluating the safety of MSG, we’d discovered that copies of most everything going in or out of the FDA, other than classified material,

was kept at its Dockets Management Office. We visited Dockets each time we were in Washington and took away copies of interesting papers. We also ordered copies of papers from home, which would be sent to us. As we read and reread the material we gathered, not even Jack could deny the close working relationship that had been forged between the glutamate industry and the FDA.

At the end of the day, what had we discovered?

- We knew that the glutamate industry, led by Ajinomoto, understood that if all MSG in all processed food was labeled, consumers would be able to determine whether or not an MSG-containing ingredient or product caused them to have irritable bowel, skin rash, migraine headache, seizures or any other adverse reaction.

Why would that be important? Because if consumers were able to identify the MSG in the things they used and the food they consumed, the fact that asthma, dizziness, and/or depression, for example, always followed use of MSG use might become obvious. The glutamate industry wouldn't like that at all. It might make it difficult to sell consumers—or maybe even the medical community—on the idea that MSG is harmless.

- We knew that the FDA cooperated with the glutamate industry at every turn. Its cooperation can be traced back to September 1969, when FDA Commissioner Ley testified before the Senate Select Committee on Nutrition and Health, presenting evidence from four studies that, he alleged, demonstrated MSG was safe. It was later disclosed that two of those studies were incomplete, and two didn't even exist.
- We knew there were no meaningful regulations for identifying MSG or the amount of MSG in any product. The FDA's refusal to identify MSG through labeling is central to the success of the glutamate industry. Where MSG is concerned, that's really what the FDA is all about.
- We'd seen that the FDA allowed "monosodium glutamate" to be given as an illustration of a common safe food:

"It is impracticable to list all substances that are generally recognized as safe for their intended use. However, by way of illustration, the Commissioner regards such common food ingredients as salt, pepper, sugar, vinegar, baking powder, and monosodium glutamate as safe for their intended use." (CFR 21 582.1)

- We knew the FDA had acknowledged that to advertise products as “No MSG,” “No Added MSG,” or “No MSG Added” when they contain ingredients that are sources of free glutamic acid such as hydrolyzed protein, was in direct violation of Section 403(a)(1) of the Federal Food, Drug, and Cosmetic Act. Yet, the FDA allowed the words “No added MSG” and “No MSG added” to be used, illegally, on labels of foods that contain MSG.
- We knew the FDA ignored evidence of monosodium glutamate toxicity—or if not ignored completely, evidence of possible MSG toxicity would be submitted to representatives of the glutamate industry for evaluation, whereupon the safety of MSG would be confirmed.
- We knew the FDA-sponsored investigations into the safety of monosodium glutamate were rigged from the get-go.
- We knew when the glutamate industry wasn't satisfied with the outcome of an FDA investigation, the final report of that investigation would be rewritten.
- We knew the FDA cooperated with Ajinomoto in designing studies from which the industry would claim to have demonstrated that MSG was a safe food additive. We found evidence to that effect in the files of the FDA (See Exhibit 1.)

## **Exhibit 1**

### **Evidence of FDA Cooperation in Designing Industry-Sponsored Studies**

- A July 13, 1990 letter from IGTC chairman Ebert to Walter Glinsmann, M.D., Associate Director of Clinical Nutrition, Division of Nutrition, FDA, reads, in part "...attached are three [double-blind] protocols for your use...IGTC would be interested in your views, especially on the proposed work by Drs. Kirby and Kjos."<sup>193</sup>
- A January 2, 1991 letter from IGTC chairman Ebert to Fred R. Shank, Ph.D., Director, Center for Food Safety and Applied Nutrition, FDA, requested a scientific review session on MSG with FDA scientists. IGTC chairman Ebert elaborated on what the IGTC wanted covered at the meeting, and offered the names of FDA personnel who should attend. "In the past, IGTC has requested meetings with FDA staff for purposes of informal reviews of MSG research. Scientists who have carried out studies on MSG, usually in university laboratories or clinics, have presented their data to agency scientists for review and discussion....If Dr. Donald Kirby, who is currently carrying out research on MSG at the Medical College of Virginia, has sufficient clinical data by the time of an FDA meeting we would propose inviting him also."

After elaborating on what the IGTC wanted covered at the meeting, the chairman continued: "As FASEB plans a one day Hearing on Free Amino Acids on February 4, 1991, it seems advisable to complete an FDA meeting prior to that date....FDA scientists who have participated in MSG research discussion in the past included among others: Drs. Shank, Hattan and Scheuplein. Others who would be key attendants include Drs. Rulls, Lin and Bailey...Members of the IGTC/TGA Executive Committee also would plan to join the meeting."<sup>194</sup>

- A December 9, 1991 FDA Memorandum of Conference notes that "The IGTC requested the meeting to discuss a protocol that they are currently developing for a proposed food allergy study involving MSG. We informed the visitors that we will provide our comments only after they have submitted a written protocol to us with some detailed description of the proposed study."
- A September 4, 1992 FDA Memorandum of Conference reads: "Dr. Kimura gave me a copy of the [IGTC] request (dated 8/20/92) for a meeting with the Commissioner and a copy of the Bob MacLeod's brief response (dated 9/3/92) to the IGTC. We both agreed that once a description of their research plan (or protocols) is given to us, a meeting will be scheduled for their scientists to discuss with our review staff regarding their research plan aimed to resolve scientific issues surrounding adverse reactions allegedly caused by monosodium glutamate consumed in food."
- On October 23, 1992, the FDA hosted a conference at the Center for Food Safety and Applied Nutrition, FDA. Present were Geha (Harvard Medical School), Saxon (UCLA Medical School), Patterson (Northwestern University Medical School), Ebert, (Chairman IGTC), Yoshi-hisa Sugita (IGTC), Takeshi Kimura (IGTC); and Hattan, Tollefson, Glinsmann, Bailey, and Lin of the FDA. Protocols for the Geha, Saxon, Patterson study called for use of aspartame in placebos, as had all other double-blind studies receiving FDA approval.<sup>195</sup>

- We knew the FDA ignored the fact that studies presented to it by the IGTC as evidence that MSG was a harmless food additive used MSG-containing ingredients other than monosodium glutamate as well as neurotoxic aspartic acid (found in aspartame) in their placebos.
- We knew the FDA Adverse Reactions Monitoring System (ARMS) was nothing more than window dressing; it never solicited information. The FDA disbanded the ARMS when the need to pretend it was interested in the toxic potential of MSG diminished.
- We knew that minutes of FDA meetings with consumers were changed when it served the purposes of the glutamate industry.
- We knew that medical evaluations of MSG-sensitive people were altered by the FDA.
- We knew the FDA had chosen two friends of the glutamate industry, IGTC Chairman Ebert and another IGTC operative, to serve as consumer advocates on its Food Advisory Committee.
- We knew the FDA suppressed information pertaining to the toxic potential of MSG:
  - In 1992, the FASEB study on the safety of amino acids in dietary supplements had warned about the use of MSG in them. That information was never shared with the public.
  - As early as 1990, the FDA became aware that MSG produced through acid hydrolysis of proteins contains carcinogenic mono and dichloro propanols. That information was never shared with the public.
- We knew that MSG produced through acid hydrolysis of proteins contains carcinogenic mono and dichloro propanols. If enzymes were used to produce hydrolyzed proteins, this wouldn't be the case, but since using enzymes is more costly than using acid, most of the hydrolyzed protein products found on grocers' shelves contribute to the development of cancer. Have you seen that information? Since 1990, the FDA has been thinking about it.
- We knew the FDA published and distributed material attesting to the safety of monosodium glutamate. We saw some of that material in the FDA Medical Bulletin and more in the FDA Backgrounder.



- We knew the FDA reinforced the misinformation put out by the glutamate industry, distortions of fact like, “The glutamic acid in monosodium glutamate is identical to the glutamic acid in whole protein.”
- We knew the FDA refused to be discovered when sued over its failure to require identification of MSG through labeling.
- We knew when Dockets copied material we’d requested, they made extra copies for our minder.
- We knew the FDA approved the use of glutamate-blocking pharmaceuticals<sup>1</sup> while encouraging industry to pour processed free glutamate into processed food.
- We knew the FDA refused to provide consumers with lists of ingredients that contain MSG.
- We knew the FDA allowed the term “natural” to be used in reference to excitatory amino acids.
- We knew the FDA allowed the glutamate industry to create and use sources of MSG that contain carcinogenic mono and dichloro propanols and heterocyclic amines.
- We knew the FDA told people that the free glutamic acid in processed food is identical to the free glutamic acid found in unprocessed food and in higher organisms, without reference to the fact that the free glutamic acid in processed food is invariably accompanied by impurities.
- We knew that in all of this, the FDA parroted the words of The Glutamate Association and the IGTC.

We had thought that with the new Obama administration, care might be taken to turn the FDA back to its original charge of guaranteeing the safety of both food and drugs. With the appointment of Michael R. Taylor, former partner in the law firm of King & Spalding, and former vice president for public policy of Monsanto Company, to Obama’s transition team and from there to the post of FDA Deputy Commissioner for Foods, all hope for a return to concern for consumers disappeared.

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<sup>1</sup> - GlaxoSmithKline’s Lamictal (lamotrigine) is a glutamate blocker. So is Amantadine (Symmetrel®).

Michael Taylor is a cousin (maybe second cousin) of Tipper Gore, the former wife of Al Gore, vice president under President William Clinton. The work experience he brings to his most recent job at the FDA comes from years of dedicated service to Monsanto.

Michael Taylor is the man from President Clinton's FDA who oversaw FDA approval of rBGH (recombinant bovine growth hormone), and thereby subjected citizens of this country, and many others, to increased risk of breast, prostate, and colon cancer. rBGH is a genetically engineered, potent variant of the natural growth hormone produced by cows. Its use forces cows to increase their milk production by about 10%, makes cows sick, and facilitates the production of milk that's chemically and nutritionally different than natural milk.

Michael Taylor has additional glutamate industry credits. He was instrumental in securing FDA approval of aspartame.

MSG-sensitive people may remember Michael Taylor from his November 3, 1991 performance on "60 Minutes," where he represented the interests of the FDA and Ajinomoto (close friend of Monsanto) by answering Mike Wallace's questions. All Taylor would say was that the FDA was looking into labeling. The FDA doesn't even pretend to do that anymore.

On January 14, 2010, Lyndsey Layton wrote an article on Michael Taylor for the *Washington Post*. It was an excellent article, covering every aspect of his professional career, and included the following information:

*"Taylor is a familiar figure at the FDA. He began his career as a staff attorney at the agency in 1976. Then he worked for a decade at King & Spaulding, which represented Monsanto Corp., the agribusiness giant that developed genetically engineered corn, soybeans and bovine growth hormone.*

*He returned to the FDA in 1991 as deputy commissioner for policy and pushed through requirements that producers of seafood and juices adopt measures to prevent bacterial contamination. During the same period, the FDA approved Monsanto's bovine growth hormone, and Taylor was partly responsible for a controversial policy that said milk from BGH-treated cows did not have to be labeled as such.*

*In 1994, Taylor went to the U.S. Agriculture Department to run its food-safety program. He required meat and poultry producers to take measures to prevent bacterial contamination, despite strong opposition from those industries. Observers expect Taylor to impose those same kinds of preventive controls on all the foods regulated by the FDA.*

*After the USDA, Taylor went to work for Monsanto as a vice president for public policy. He moved on to a think tank and then a teaching stint at George Washington University.*

*‘He is the quintessential revolving door,’ said Marion Nestle, a professor of nutrition, food studies and public health at New York University. Taylor’s support for BGH and Monsanto’s other genetically modified products at the FDA was ‘questionable,’ she said. ‘On the other hand, when he went to USDA, what he did there was absolutely heroic. He’s been very strong on food safety.’”*

You might notice, as I have, that the measures Michael Taylor took at the USDA to promote food safety didn’t negatively impact Monsanto. Similarly, nothing he’s advertised as scheduled to act on as FDA Deputy Commissioner for Foods will impact Monsanto negatively. I’d also submit that in cases other than those where the role of big business is undeniable, regulation will be aimed at small, generally independent, companies. Protecting the American population from toxic additives intentionally added to processed food won’t be considered. Enforcing regulations prohibiting deceptive and misleading labeling, such as claims that there’s no MSG added to products that contain it, is something that will never happen while this fox guards the henhouse.

I’ll never understand how a man who promotes the use of toxic chemicals in processed food can be characterized as devoted to food safety. But I do understand how he got to the FDA in the first place, and what power enables him to remain there.

If Michael Taylor ever left Monsanto, he’s back there now, working out of his office at the FDA.

I picked up a little phrase the other day on public radio that suits the FDA to a T. “A lap dog, not a watch dog.” And neither the president nor the Congress ever walks the dog.



## 11 | *Jack: Moving Into a New Decade*

It was all over. We'd learned that the FDA worked hand in hand with the glutamate industry, led by Ajinomoto. We'd come to the FDA with reproducible data attesting to the toxicity of MSG, and had been ignored.

We had learned that Ajinomoto and friends were rich and powerful, powerful enough to control the U.S. legislature; any state legislature that might think to challenge them; and with limited exceptions, control the media. We understood their propaganda campaigns and knew exactly how they rigged the studies they presented to the FDA and "other authoritative bodies" as evidence that their product, monosodium glutamate, was safe. We'd sued the FDA over the issue of labeling, and seen our case dismissed by Magistrate Mummert. In 1989, I'd delighted in the thought that life would soon be better, that I could avoid ingesting the substance that caused me so much suffering. Now, almost 10 years later, I had all I could do just to stay alive. A feeling of well being—good health—was out of the question. I knew there were others like me, others who knew less than I did about avoiding MSG hidden in processed food, but it was small consolation that I was not the only one.

On March 24, 1998, we were at Stanford for my prostate cancer checkup. Everything looked good. I thought it would be.

From May 3-5, 1998, we attended the NIH-sponsored glutamic acid conference titled, "The Glutamate Cascade; Common Pathways of Central Nervous System Disease States," then spent an additional two days in Washington. Adrienne had submitted a presentation to the conference poster session. A poster presentation that wasn't accepted. That came as no surprise, since it was already clear there were researchers at the NIH with glutamate industry interests.

We saw the poster presentation, "The Role of Monosodium L-Glutamate (MSG) in Asthma: Does it Exist?" by Stevenson et al. funded by the IGTC—done at the time Simon was swearing to Adrienne that he and Stevenson weren't doing research for the glutamate industry. That was just another little lie. No greater than any of the others.

In June 1998, we took a seven-day trip to Atlanta, home of the Kellen Company, the IGTC and anti-aspartame activist Betty Martini.

That year we also went to Czechoslovakia, a country I'd always wanted to visit, since many of my ancestors came from that part of the world. I proposed to lay out an itinerary and rent a car as we so often did when we traveled, but Adrienne insisted that since neither of us read or spoke the language, and wouldn't be able to order food in restaurants, we weren't going unless we went with either a tour or a private guide and driver. We decided on the latter; Mirek was our guide, driver, and wonderful traveling companion.

We stayed in private apartments, vacant summer homes, motels and hotels. Mirek found a relative of mine who'd survived the Holocaust because his Jewish grandfather, who died just before the Nazis took over the area in which he lived, had married a Catholic girl and converted. We had a long afternoon visit. Best of all from my point of view, except for the one reaction I had to canned whipped cream, I didn't have an eating problem as long as we were with Mirek.

We closed out 1998 with a trip to Southeast Asia arranged by Archaeological Tours. We traveled from Bangkok through Laos, Cambodia, Burma, and back to Thailand. I had to work with our guide the first day to get him to understand my food sensitivity, but from that day forward, there was never a problem. There's never a problem when fresh food is available.

It was particularly easy to avoid MSG in Myanmar because the woman in charge of tourism for the government was severely affected by MSG, and she'd advised restaurants not to use it. We also heard that a physician with political connections had appeared on television, advising citizens to avoid using MSG because it could affect their health.

It was about this time that Adrienne began working on a web page for the Truth in Labeling Campaign.

There were other things happening in 1998 under the radar. On February 8, 1998, a friend sent an e-mail to Adrienne, telling her that the journal *Accountability in Research* had sent out a request for contributions regarding scientific fraud and related issues. Her friend thought it would be nice to get some of the stuff the MSG and aspartame industries

pass off as research discussed openly in a scholarly journal, and he gave Adrienne the e-mail address of the contact somewhere on the other side of the world.

Adrienne's 51-page article, "The Toxicity/Safety of Processed Free Glutamic Acid (MSG): A Study in Suppression of Information" was published in *Accountability in Research* in July 1999. It had been almost a year and a half in the writing, with her editor insisting that every detail be substantiated. Not once during that time had she mentioned the article on either the phone or the fax; and it is to those restrictions that Adrienne attributes the fact that there was no pressure on the publisher to prevent it from being published. But neither was there the open discussion hoped for once the article was published. The glutes and their media simply ignored it.

In 1998, there were also things happening that would materially affect us, about which we knew nothing. Auxein Corporation was granted permission to spray unregulated amounts of monosodium glutamate combined with MSG from other sources on agricultural products. We knew nothing about the approval until 1999, when Adrienne, entirely by accident, read of the approval of Auxigro WP Metabolic Primer (Auxigro) and the free glutamic acid used in Auxigro, in the *Federal Register*.

The story of Auxigro is the story of a double-blind study you won't hear from the glutamate people. In the late 1990s, one of our MSG-sensitive friends reported that she'd eaten potatoes in addition to her otherwise standard diet, and had an MSG reaction. Another friend independently told the same story, but his reaction had been to lettuce. What did Adrienne and I believe? Our friends had gone off the deep end. That's what we believed. Maybe too much MSG had gotten to them.

Then came the information that MSG was being sprayed on crops. Two of the crops that had been used in field tests and then brought to market (prior to approval) were lettuce and potatoes. Our small sample double-blind study told us that monosodium glutamate sprayed on crops could cause adverse reactions in MSG-sensitive people.

The EPA regulates (or fails to regulate) the use of pesticide products. As you might have anticipated, we brought the information we had on

the toxic effects of MSG to the EPA, where, after being given politically correct lip service, it was ignored.

Auxein Corporation had also applied to the State of California for approval of its product, Auxigro, and the glutamic acid contained in it. California often has more stringent environmental standards than other states or the federal government, so California registration of Auxigro would please Auxein Corporation's investors. In May 1999, the California Department of Food and Agriculture (CDFA) approved spraying MSG on wine grapes (calling the spray a fertilizer). Steven Wong, Branch Chief, Agricultural Commodities and Regulatory Services, told us that to have a product approved for use as a fertilizer in California, a company had to do little more than make application.

In April 2000, and again in July 2001, the California Department of Pesticide Regulation (CDPR) approved spraying MSG on wine grapes (calling it a fungicide). Barry Cortez, Branch Chief, CDPR, told us the CDPR would only turn down a product if it appeared to be ineffective, and Auxigro didn't appear to be ineffective. Oh, the power of industry! Registration of an effective poison wouldn't necessarily be turned down.

Other approvals followed until MSG was approved for use on all agricultural commodities.

Discussion with the CDPR was more protracted than discussion with the EPA, but the end result was the same. California chose to allow use of unregulated amounts of processed free glutamic acid (MSG) for agricultural purposes. It wasn't called monosodium glutamate, hydrolyzed protein, or MSG, however. In the approvals it was called L-glutamic acid—but make no mistake, it was processed free L-glutamic acid complete with its impurities.

We first formally presented details of our displeasure to the CDPR on June 8, 1999. We didn't know at the time that the glutamate industry had as much clout with the CDPR as they had with agencies of the federal government.

Because we were early on the scene in California, we were able to track the progress of Auxigro's approval. As we challenged it, the CDPR turned to authorities on the subject of amino acid safety, not to Taylor and Ebert—that would have been too obvious—but to their friends and



colleagues on the faculty of the University of California at Davis. UC Davis is a school with a well-deserved great reputation in the field of food technology, where Food Science and Technology faculty are members of the Institute for Food Technologists (IFT), where Taylor and Ebert serve as role models.

Despite our protests, processed free glutamic acid was ultimately approved for use in pesticide products in California.

We'd repeatedly asked the CDPR questions, which if answered, would have jeopardized the approval of Auxigro and "L-glutamic acid." They were simple but possibly embarrassing questions like:

*"How, and by what company, is the processed free glutamic acid used in Auxigro produced? Is it produced by Ajinomoto or others by a method of bacterial fermentation wherein '...bacteria...excrete glutamic acid they synthesize outside of their cell membrane into [a liquid nutrient] medium and accumulate there. The glutamic acid is separated from the fermentation broth by filtration, concentration, acidification, and crystallization...?'"*

A little bird had told us that the "L-glutamic acid" used in Auxigro was monosodium glutamate imported from Germany.

The Truth in Labeling Campaign asked the CDPR how a proper scientific evaluation could be made without having the answers to those questions. Had the CDPR responded, its answer would have been that a proper scientific evaluation **couldn't** be made without this information. In fact, a proper scientific evaluation hadn't been done. But that question was one of many that CDPR Branch Chief Barry Cortez didn't and won't answer.

Auxein Corporation, later known as Emerald BioAgriculture, also applied to the National Organic Standards Board (NOSB) for organic certification, with the independently owned and operated Organic Materials Review Institute (OMRI) pushing for its approval. When I made my presentation to the NOSB, the OMRI report recommending approval was already in the hands of NOSB board members. I really do believe that only because of my presentation, which included demonstration of the fact that Auxigro was a synthetic product, did the board deny approval of Auxigro and L-glutamic acid for use as organics.

When the NOSB rejected the application, I assumed OMRI would cancel its relationship with AuxiGro. I found, however, that OMRI merely tabled the issue, suggesting to me that they would try again sometime in the future to have AuxiGro approved for use as an organic.

In subsequent discussions with OMRI, I mentioned that fertilizers like hydrolyzed fish protein were also synthetic, and could cause adverse reactions in some MSG-sensitive people. The OMRI person became combative, declaring that he'd observed production of the fish protein, and all the producer did was take the remains of fish and grind them up for use as a fertilizer. As I pushed him to review the entire process, he finally admitted that they pour "a little enzyme" into the mixture. Thus, he confirmed there was MSG in the hydrolyzed fish protein: protein (in fish) combined with acids or enzymes ("a little enzyme") creates MSG.

During the course of my various discussions, I learned that OMRI charged a fee for reviewing a product and recommending that it be added to the NOSB list of approved organic products. I also learned that if a product was approved, the producing company would pay OMRI an annual fee as long as it remained approved. If there was no NOSB approval, there'd be no annual fees paid to OMRI. It sure looked like a conflict of interest to me.

The use of AuxiGro hasn't been limited to the U.S. We saw notice in the early 2000s that Intrachem had been licensed to distribute AuxiGro in Europe.

It would appear that at the end of the decade, registration of AuxiGro in the U.S. lapsed. We found AuxiGro had failed to apply for re-registration with either the EPA or the CDPR, and therefore, could no longer be legally sold in the U.S. That may have changed, but used in the U.S. or not, AuxiGro is now being offered for sale throughout the world.

Interestingly, the withdrawal of AuxiGro from the American market coincided with the attention being given to the strange disappearance of bees from beehives, referred to as "Bee Disappearance Disorder." I was interested in the phenomenon, and found the disorder had spread beyond the boundaries of the U.S. and was beginning to occur in other countries.

Being familiar with the glutamate literature, and recognizing that scientists had found that laboratory animals lost their way in mazes

after being exposed to MSG, it occurred to me that bees visiting plants sprayed with MSG (in Auxigro) might become disoriented, fail to find their way back to their hives, and die. At the time of the onset of the Bee Disappearance Disorder, Auxigro was often sprayed from crop-dusting airplanes. It appeared obvious that bees would be exposed to Auxigro sprayed in this fashion, both at the time of spraying and through residues that would remain on plants. Thus, spraying MSG on growing crops might be contributing to the disappearance of bees. That idea was reinforced by the knowledge that many MSG-sensitive people become disoriented following ingestion of MSG in amounts that exceed their tolerance levels.

I made a number of attempts to discuss my theory with people in the bee industry and related agencies. To my knowledge, my theory never received attention from any industry organization, agency or person, although there has been discussion of the possibility that Bee Disappearance Disorder was caused by pesticides.

It had occurred to me that taking Auxigro off the market early on would have been smarter than facing class-action lawsuits later.

The fact that Auxigro was being offered for sale around the world meant nothing to me until 2003, when I found that Italian and Spanish wines labeled 2003 and after were no longer safe for me to drink. I'd been having MSG reactions to most California wines since wine made with grapes sprayed with Auxigro had come to market, but I'd been drinking European wine without a problem.

Eventually, we discovered Auxigro was being distributed throughout Europe (Spain, Italy, Portugal and Switzerland), Asia, Central America (Mexico), Latin America, and Canada, if not elsewhere. Details of its distribution were secret. We attempted to question Intrachem Bio International SA, Geneva, Switzerland, the Auxigro distributor for at least parts of Europe, but the company refused to respond to our questions. In 2011, I couldn't tolerate certain wines from Italy, Spain, Chile, France and Argentina. On the other hand, I could generally tolerate California wines from small and/or organic vineyards, and looked forward to the time that I could tolerate others.

By the end of 1999, I was sure the end of my life was just around the corner. I was miserable. I simply never felt well. One day when Adrienne

was out doing whatever she was doing, I decided to stop at a health fair at the county fairgrounds not far from our home. I really didn't know what I thought I'd do there, but I had nothing better to do.

As I walked, I came upon a chiropractor with a portable computer talking to people about diagnosing and then treating their allergies. For \$15, I could select a list of products that included many I knew to contain MSG, be tested for sensitivity to them, and be told to which ones I was allergic or sensitive.

After watching the chiropractor conduct tests on a number of people, I decided to give him \$15 to run me through one of his panels. Just like the others, I was amazed to find he was totally correct in his analysis, identifying foods to which I knew I'd react.

This chiropractor had come to the health fair to encourage people to come to his office for Nambudripad's Allergy Elimination Technique (NAET) treatments. I was tempted to try NAET, but I'd seen NAET demonstrated years before, and had been totally unimpressed. Then, too, this chiropractor made me uncomfortable.

Adrienne was home when I returned from the health fair, and I recounted my experience. Then I told her something she already knew: I had nothing to lose. I wanted to believe that the NAET treatments could help me. I hated to admit it, even to myself, but I was in such a state that I think I might have tried anything.

Adrienne understood I was desperate. She didn't find fault with my interest in NAET, but made two recommendations. First, I should get the opinion of a Chinese medicine doctor who helped me at one time, and was now helping Adrienne. Second, she insisted if I decided to start the NAET program, I should go to the person who'd invented it instead of one of her students. Adrienne reasoned that if I went to the local chiropractor, who I really didn't care for, and the program didn't help me, I'd never know if it was the chiropractor or NAET itself that didn't work for me.

I started NAET treatments in January 2000. Both the theory and the procedure are simple and straightforward. An allergy/sensitivity, as defined in NAET terms, is a blockage to the flow of energy caused by an offending substance. In NAET, the channels of energy flow (the meridians)

are held open through the use of acupuncture or acupressure while the offending substance is held in the patient's hand, and the energy of the offending substance begins to flow unencumbered from meridian to meridian. Once the energy of the offending substance has passed through all the meridians (approximately 24-25 hours), the blockage will usually have been eliminated, i.e., the allergy/sensitivity will have been resolved. On occasion, it will take more than one treatment to resolve a sensitivity.

Dr. Nambudripad, who had developed NAET, was very clear in her instructions to me. NAET would clear blockages to the flow of energy, so she was certain it could help me, but it wouldn't cure my sensitivity to MSG, since MSG was a toxin, a poison, and NAET wouldn't protect me from that. I didn't begin to understand what the mechanisms might be, but Nambudripad told me that while NAET could help me avoid the immediate reactions—what most people would call “allergic reactions”—it couldn't prevent the addition of toxins to my body. She warned me not to be complacent and eat food that contained MSG just because I no longer had what we might call an allergic reaction to it.

It was immediately clear that if the system worked at all, it was going to take me considerable time to clear all my energy blockages. The energy of MSG in the ingredient known as monosodium glutamate differs from the energy of MSG in sodium caseinate, for example, and each would have to be addressed separately. Therefore, I began to drive the 60 miles to Buena Park three or four times a week to progress as quickly as I could.

A couple of years into treatment, we met two women who'd seen Nambudripad in England, and were so grateful for her help, that when problems arose they traveled from England to see her in California. I'd been using muscle testing much as a chiropractor would to detect allergies and sensitivities, but muscle testing done in this manner required a person to test me, and was awkward to do in public. These women introduced me to the O-ring tester; showed me how to use it at home and in the grocery store; and taught me how to use the O-ring tester to scan a menu not only for the selection of food, but to identify foods that were safe for me to eat. The O-ring tester is nothing more than a spring attached to a dial that moves when the spring is depressed. It's a kinesiology device to test muscle strength that can be used by a single person. If it really worked as the ladies described, it would be the ultimate in protection, and I might never have an MSG attack again.

Toward the end of April, Adrienne and I set off again for France. This time, we spent three days dining in Paris, then rented a car and drove east through Metz and Nancy to Strasbourg, stopping at Sarrebourg, home of Mephisto shoes, and from there on to Alsace and a self-guided tour of its cheese factories and vineyards. We headed south to Colmar and Illhaeussann for dinner at its world-class restaurant, Auberge de L'ill, and journeyed to Mulhouse and the incredible collection at the National Auto Museum of France. We then drove back west and north to Paris and more exceptional food.

Throughout our trip, the French seemed to be using more processed food than previously, but I found it easy to avoid. The NAET treatments may have been helping me, but there was no way for me to know that. I was not yet using the O-ring tester.

In late September 2000, I was privileged to address the annual meeting of the Celiac Sprue Association. People with Celiac Sprue, a genetic disease that results in malabsorption of grains, have some of the same problems with food labels that MSG-sensitive people have. Grains are often hidden in food under names other than wheat, rye, barley or oats.

On this trip, I had my first test of the efficacy of NAET treatments. I went to a restaurant I was sure used processed foods, and after eating food for which I'd already been treated, I sat at the table waiting to become seriously ill—but nothing happened. NAET had been validated.

In October 2000, I traveled to India with the Chicago Council on Foreign Relations. I didn't yet know of the O-ring tester, but managed pretty well to avoid MSG. I did make one stupid mistake; I succumbed to some freshly made ice cream, forgetting that milk was likely loaded with parasites, and came down with explosive diarrhea.

In August 2001, we finally had the opportunity to file a formal objection to the EPA's approval of Auxigro. The original approval had been granted before we knew it had been requested. The second application was a modification of the original application, and we could object to it.

As might have been anticipated, our efforts were fruitless. We were advised the EPA had submitted our data to Auxigro's producer, and had been informed that the data we'd submitted to the FDA were meaningless. Even anticipating that this was the kind of response

we'd get from the federal government each time we challenged the safety of MSG in general or monosodium glutamate in particular, we never passed up an opportunity that might give us a foot in the door to exposing MSG's toxic potential.

On June 18, 2002, we provided written testimony to a review of the safety of monosodium glutamate being done by the Australia New Zealand Food Authority (ANZFA). Each time we made a submission, be it to the FDA, EPA, CDPR, legislators, or now ANZFA, I compiled volumes of literature and bound them into a presentation.

In 2003, we rented a car and traveled through Spain. I'd discovered Paradors, where the finest food was served. Eating in Paradors posed no problem. Everywhere else, I had to be more vigilant because the use of processed food was growing. At that time, the Glutamate Association and the IGTC had a presence in Europe in the person of the comité des fabricants d'acide glutamique de la CEE [Committee of Glutamic Acid Manufacturers of the European Economic Community] (COFAG), which had offices in Paris.

By this time, I was using my O-ring tester religiously to test my food, and doing very well with it. I hadn't yet grown to believe I could use it to read a menu, so every once in a while I inadvertently ordered something I couldn't eat. Adrienne was very good about ordering something I'd enjoy eating if the meal I'd ordered didn't work for me.

In February 2004, we rented a car in New Zealand and spent three weeks touring both islands. I'd gone to Antarctica some years earlier with a number of environmentalists, all of whom lived in New Zealand. From discussions with them, it appeared New Zealand had to be the safest place for me to travel with respect to environment problems and food purity.

In planning our three-week trip, we tried to pack lightly, and as part of that program, I bought cotton disposable underwear. I put on my first pair of disposable underwear the day we caught the plane to New Zealand, and continued to wear it through the day of our arrival and into the evening, when our hotel room became available.

The following morning, I found I was passing blood when I urinated, and with each urination, the amount of blood I passed became greater.

We considered the options: go to a local hospital or return to the U.S. It was doubtful I was having a reaction to MSG, because I'd brought my own food on the airplane, and eaten carefully once in Auckland. It was possible, of course, that I was simply having an allergic reaction to something other than MSG, a possibility that had begun presenting itself from time to time. A physician friend had said it wasn't uncommon to develop second and third allergies if you had repeated reactions to a first allergy or sensitivity. The first one would have weakened the body's defenses against other allergies and sensitivities. This time-dependent sensitization, which might be thought of as a progressive increase in the size of a response over repeated exposure to an allergenic substance, is referred to as kindling.

It was time to ask questions. What had I eaten that was different, or what was I doing that I didn't do at home? The only thing I could think of was the disposable underwear.

By this time, both Adrienne and I had become comfortable using kinesiology, and Adrienne used kinesiology to question what was causing the bleeding. Muscle-strength testing told us that I was unable to tolerate the spandex band in the disposable underwear. That the spandex band had brought on the bleeding.

I changed to my regular underwear (Adrienne had insisted on bringing two pair) and by the next morning, the bleeding had stopped. We purchased new underwear for the rest of the trip, and the bleeding became history.

But there were other problems. It had become our practice to stop during the first day in any new town at a local grocery store, and Auckland was no exception. I was shocked to find that with the exception of a row of organic chickens, all the chickens in rows and rows of chickens had been injected with MSG in some kind of basting material. Chicken was thereby eliminated from my food choices.

I had no problem avoiding chicken, but New Zealand wasn't agreeing with me. Would you believe that quality New Zealand olive oil infused with lemon was causing me a problem? In discussing the virtues of olive oil with a gentleman selling olive oil at an open air market, I learned that in lemon-infused olive oil, lemons are cut up and left sitting in oil for a time sufficient to allow the acid in the lemons to break down any protein



present in the oil, producing “just a little” free glutamic acid (MSG). The restaurants we’d gone to, in their efforts to provide high-quality meals, used the more sophisticated and expensive lemon-infused olive oil. Once I made that discovery, I made certain that olive oil I used in restaurants was olive oil, only, and I was fine.

Even after eliminating chicken and lemon-infused olive oil from my diet, I found it difficult to eat in New Zealand. It was the generosity of the people that was doing me in. A simple cookie came surrounded by whipped cream that contained MSG. These kind people just couldn’t understand that when I asked for a hamburger with nothing else on the plate, other things they might put on my plate might be bad for me. People just couldn’t bring themselves to give me something they considered less than the best they had to offer.

By 2005, life had become routine. I was using the o-ring tester. I bought nothing and ate nothing without first testing it with either the o-ring tester or simple arm testing.<sup>J</sup> Eating in restaurants became possible again as long as I could find places that could provide me with fresh, unprocessed food. I rarely ate at the homes of family or friends for fear I might have a reaction while with them, but there were a few who’d make meals without using anything processed, and I really appreciated that.

My first visit as a patient to a hospital (outside of when I was born) took place in the wee hours of the morning of July 12, 2005. Granddaughter Hannah, had come for a two-week vacation, as was our custom for grandchildren who reached the ripe old age of 10. On the evening of July 11, we’d gone to the Pageant of the Masters in Laguna Beach, an extraordinary presentation of classical works of art populated by real people within the frames and backgrounds designed for them. We had dinner at one of our favorite restaurants, enjoyed the presentation, and were on the way home when I began to feel worse than not well. Adrienne suggested we stop at the hospital we’d be passing, but I chose not to do that.

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J - Extend one arm in front of you, parallel to the ground and ask a friend to push your arm down while you push up against his pressure. If you have a harmless object in your opposite hand (or your hand is empty), you’ll be able to hold your arm level against your friend’s force. If the object in your opposite hand is not good for you, as something with MSG in it wouldn’t be good for me, your muscles will go weak, so to speak, and you won’t be able to hold your arm up. You’ll find more about kinesiology on the web page of the Truth in Labeling Campaign: [www.truthinlabeling.org/kinesiologypractice.htm](http://www.truthinlabeling.org/kinesiologypractice.htm).

Three hours later, I had chest pain and was having such difficulty breathing that I woke Adrienne, who in turn woke Hannah, and I let Adrienne drive me to the hospital. Friends have remarked that I must have been in truly critical condition if I didn't insist on driving myself.

Adrienne had Hannah dress for the occasion, and later remarked that her pajamas might have been a better choice. Adrienne brought a pillow and blanket for Hannah, and Hannah (a voracious reader) brought enough books to see her through the night. Adrienne expressed great concern over my condition, but Hannah was blasé about the whole thing. She had brothers, she told us, and had been in emergency rooms many times before.

In the end, it was determined only that I was fibrillating, but because a heart attack couldn't be ruled out, I'd be kept in the hospital for a day or two for observation. By morning, I was feeling no pain, and had no trouble communicating. Actually, I never had trouble communicating, even in the wee hours of the morning before. So Hannah and Adrienne brought me a cooler loaded with ice and food to take me through the day, stayed to chat for a half hour, and then took off for Disneyland. We'd purchased Disneyland passes for the three of us for two days each, which meant the two of them could spend an extra day at Disney without additional charge, but before they set out each day, they brought me a new ice chest and a daily supply of food.

I was very well cared for in the hospital. The nurses offered to make whatever food I might be able to eat, a hardboiled egg, for example. They seemed to have no difficulty understanding the extent of my sensitivity. Similarly, the physicians respected the fact that binders and fillers in pills that might have been prescribed for me probably wouldn't be tolerated, so they didn't prescribe any.

I was hooked up to a cardiac monitor and monitored with the rest of the patients in the cardiac care unit. The technician told me that in all his years, he'd not seen as interesting a heartbeat as I had. When I'd come in, I'd been fibrillating, but that had stopped. Now I was told I was fibrillating again.

On the second night, while sleeping, my heartbeat evidently deteriorated. I was awakened by someone shaking me and was surprised to find about eight people surrounding my bed.

My heartbeat must have improved after I was awakened, because they provided no intervention while my fibrillation continued. The next day, after stressing it on a treadmill, my heart resumed a normal beat, and the cardiologist dismissed me from the hospital. He assured me I'd not had a heart attack, and he didn't know what else he could do for me. Once home, I began fibrillating again—and continued fibrillating for five days. That's not uncommon timing for fibrillation following MSG ingestion.

When I left the hospital, I convinced the nurse to give me a sample of the heart monitor contacts that had been glued to my chest. They were Red Dot contacts produced by 3M. I'd asked for the sample because as they removed the contacts from my chest, I observed that the center of each contact that had touched my skin had a small bulb of gelatinous material. I knew that the glue on the contact likely contained some starch, an ingredient that would have small amounts of MSG, but I didn't think such a small amount would cause such an immediate reaction. After the contacts were removed, I realized there would also have been MSG in the gelatin that had made contact with my skin.

Back home, I contacted 3M, told them of my situation, and asked for a list of the ingredients used in the Red Dot product. They refused, stating the information was proprietary. I then called a friend who was a major 3M customer, and asked for his help in getting the ingredient list. It turned out that it was the guar gum in the gelatinous material that was the offending ingredient. The 3M laboratory had found a small amount of free glutamic acid in the guar gum, which, they claimed in a carefully worded e-mail, was so very small that it wouldn't have caused my reaction. I wish I had \$10 for each time I've heard someone say that the amount of MSG was so small I couldn't have reacted to it.

Given my experience, I considered it appropriate to ask 3M to disclose in the Red Dot product insert the fact that MSG-sensitive people with little tolerance for MSG might experience a reaction from the product. 3M refused.

We traveled to Portugal and Barcelona in September 2006, flying United Airlines to Barcelona through Madrid, then on to the Guggenheim Museum in Bilbao, and on to Lisbon. It was morning when we arrived in Barcelona without luggage—which, we were told, had not been sent on from Madrid. Uncomfortable as the lack of clean clothes might have been, the real problem lay in the fact that I'd inadvertently packed my

blood pressure medicine in one of the suitcases that was lost, and the exact formulation I needed (without MSG in its binders and fillers) wasn't available in either Spain or Portugal.

From Federal Express, we learned that neither Spain nor Portugal could accept medication from outside the country. We tried a hospital, a compounding pharmacy and the American Consulate, without success. Finally, some kind person, who shall remain nameless, told me of a small country in Europe with pharmacies that could accomplish extraordinary things. My blood pressure medicine came from France, where it was made, and arrived in two days. Incidentally, it cost far less coming from France via another country to Portugal than it would have cost me in the U.S.

As the years went by, we continued to travel. Despite more MSG being poured into processed food, and a growing number of wines I could no longer tolerate, I was using the O-ring tester to choose restaurants and scan menus for safe foods, and I rarely suffered a reaction. Santa Fe and the Santa Fe Opera were favorites of ours. We also spent two weeks in Berlin and three weeks in Italy in 2007 and 2009. Kinesiology relies on energy, not on language, so menus written in foreign languages never presented a problem.

In mid-March, 2008, the financial magazine *Forbes* published "The MSG Cure," but the only thing it might have been a cure for was Ajinomoto's pocketbook. It was an interview with Kunio Torii, "the highest ranking scientist at Ajinomoto," presenting a whole new spin on the hype designed to draw the consumers' attention from the fact that MSG, in any form, causes brain lesions, endocrine disorders, and adverse reactions such as asthma and migraine headache. In short, its intent was to convince readers that monosodium glutamate is "safe." In the interview, Torii talked of feeding monosodium glutamate as a "cure" to the people most vulnerable to its toxic effects—the very young, those who are ill, and the elderly—the people most likely to have compromised blood-brain barriers and peripheral glutamate receptors being stressed. That's too sick to be a sick joke.

The Berkeley Wellness Letter remains a reliable source of glutamate industry misinformation. Every couple of years, it publishes an article that gives every indication of having been written by the glutes, spinning the tale that MSG is safe. The last industry-friendly MSG article we saw was "The ABCs of MSG" in September 2009.

From conversations Adrienne had with people at Berkeley, she concluded that a group that did newsletters for a number of organizations was writing the Berkeley Wellness Letter. She told me she'd concluded that no one on its editorial staff had written the article, which, she said, was most likely written by someone at the IGTC or its agent, the IFIC.

On April 5, 2005, an article by Melanie Warner in the New York Times talked of a new biotechnology company called Senomyx. This company had developed a product in the laboratory that would replicate the flavor enhancing attributes of monosodium glutamate. The article gave every indication that the product would act neurologically through the taste buds (glutamate receptors) just like monosodium glutamate does. The company indicated that neither the name Senomyx, nor the chemical compound used in Senomyx would be listed on ingredient labels. Instead, Senomyx would be included as one of the undisclosed ingredients in "artificial flavors." Flavors, by law, are considered proprietary ingredients, so food companies aren't required to disclose the names of ingredients contained in them.

In the article, the chief executive of Senomyx was quoted as stating that its organization was helping companies clean up their labels.

Following the announcement that Senomyx had an MSG replacement that wouldn't have to be disclosed on food labels, Kraft Foods, Nestle, Coca Cola, and Campbell's put up \$30,000,000 to assist the company in its product development in exchange for the rights to use the ingredients in certain types of foods and beverages.

One of the selling points made to investors was the fact, or claim, that the amount of Senomyx to be used in any food product would be so small that it wouldn't require FDA approval. That led me to believe the product had been developed using the relatively new process of nanotechnology, which offers many benefits to industry, but is untested for safety in foods. I, and others, have great concern that the minute particles produced by nanotechnology can easily pass through the intestinal wall, placenta, and blood-brain barrier.

Not long after its introduction, the Senomyx product received safety approval from the Flavor and Extract Manufacturers Association (FEMA). That's how it's done in the food industry. The company or companies producing or using a product declare they've found it to be

GRAS (generally regarded as safe). They have, or claim to have, research that demonstrates the product is safe. From that point, the spin masters use the industry's declaration of GRAS to sell stock, encourage venture capital investments, and market their product to consumers—without mentioning the fact that it hasn't been declared GRAS by the FDA.

In the case of the Senomyx monosodium glutamate replacement product, the safety study on which the FEMA-GRAS approval was based was a three-month study that was never published or made available to those who asked FEMA for it. I've seen articles that indicate that FEMA is a government agency, but that's not true. FEMA is a non-profit agency, funded by and for the benefit of companies in the flavor and extract industries.

Over the years, I've repeatedly asked the FDA why pharmaceutical firms spend over \$100 million dollars and take more than seven years to have a pharmaceutical approved for marketing, while Senomyx is able to put a product made in a laboratory and arbitrarily referred to as food on the market essentially without testing for safety. I haven't yet received a reply.

A number of companies have joined the bandwagon to license Senomyx' MSG replacement for use in their products. Worldwide distribution of Senomyx has been split up between several food giants. At one time, if not now, Nestle controlled an area that included Europe, while Ajinomoto had a territory that included Asia and the U.S.

In mid-2010, a number of companies, including Kraft, Campbell's, and Nestle, announced they'd be cutting the use of salt in their products by a minimum of 20 percent. That announcement coincided with the FDA's announcement that it may soon require the reduction of salt in processed foods. That coincidence reminded me of another coincidence that just happened to benefit big business. Quite some time ago, I alerted the FDA to the fact that there was benzene in the adhesive products used to secure dentures. Nine months later, the fact that there had been benzene in denture products was disclosed to the public. It was announced that manufacturers had replaced all the denture products containing benzene.

Ajinomoto has a product called Salt Answer RX-ax that's made up of modified potato starch, artificial flavor, monoammonium glutamate, sucrose, lactic acid, citric acid, hydrogenated soybean oil, silicon dioxide,

calcium lactate, and maltodextrin—at least that’s what their promotional material says it will say on the Senomyx label consumers will never see. This product clearly contains processed free glutamic acid (MSG), and I’d guess there’s a microparticulate Senomyx product in the artificial flavor—where the names of ingredients don’t have to be disclosed.

The marketing of the MSG replacement Senomyx product gives me cause for great concern. This product has never been tested for safety; isn’t FDA GRAS; and its use in ingredients doesn’t have to be mentioned on any product label.





## 12 | *Jack: Where Are We Now?*

It's November 2011. It's been 20-plus years since Dr. Schwartz and I went to Washington. Some of the glutamate industry players we met in the 1990s have changed. New dirty tricks have been added to industry's bag of tricks, but there's no threat that MSG will have to be identified on the labels of the products that contain it. Last time I checked, David Hattan and Linda Tollefson were still at the FDA, while Richard Ronk, Walter Glinsmann, and Fred Shank had moved on. With Monsanto's Michael Taylor serving as President Obama's FDA Deputy Commissioner for Foods, however, there can be no question that the FDA will continue to represent industry as opposed to consumers.

As far as MSG activity is concerned, there isn't much to monitor. Adrienne watches the research put out by the glutes, and invariably writes critiques when their work is published in medical or nutrition journals that will accept Letters to the Editors. Some of her letters have been published, but many have not. It's not for lack of knowledge or writing skill that Adrienne's letters are rejected. In recent years, glutamate industry interests have assumed increasingly greater presence in medical/nutritional publishing.

Much of the work that the glutes pass off as research now consists of reports of seminars and workshops during which industry-sponsored researchers sit around tables discussing the virtues of MSG. The rest comes from publication of papers declaring there's a fifth taste sensation (the taste of monosodium glutamate), which they refer to as umami.

In the first half of the 20<sup>th</sup> century, monosodium glutamate was characterized as a "white, almost odorless, crystalline powder with a slightly sweet or salty taste."<sup>196</sup> Early encyclopedia definitions of monosodium glutamate (which was said to contain glutamic acid, sodium, moisture, and not more than one percent impurities) claimed it's an essentially tasteless substance. What's more, most MSG-sensitive people (who'd love to be able to detect the taste of MSG and thereby avoid ingesting it) claim there's no taste to monosodium glutamate. Could

it be, then, that umami is little more than a clever contrivance/device/public relations effort to draw attention away from the fact that MSG is toxic and help legitimize its use? Fifth taste or not, MSG is toxic. As Macbeth might have said, umami is a tale told by an idiot, full of sound and fury, signifying nothing”—it’s a fairy tale that’s been sold to the American public. In my humble opinion, there’s no “fifth taste.”

Attempts to work with relevant government agencies have proved fruitless. We scrutinize their activities and see no hint of change. Similarly, it’s obvious that the legislature is in the pocket of the glutamate industry—there’s no other explanation for its inaction—so any more energy we might spend trying to educate the legislature would be largely wasted.

You may have seen one of the many reports of young athletes dropping on the playing field and dying from heart attacks. Since I know protein powders and power drinks—which are loaded with MSG and aspartic acid—are actively marketed to young athletes, I spend considerable time and energy attempting to contact athletes who’ve suffered ventricular fibrillation. My goal has simply been to alert the athletic community to the fact that MSG can cause heart irregularities, and that extreme physical stress combined with MSG will exacerbate what might otherwise be a mild MSG/aspartame reaction.

Adrienne has retired from full-time focus on MSG. She knows where it’s hidden in food (see Appendix 3). She knows how the glutes engineer their research to come to the predetermined conclusion that MSG is safe. There’s little for her to do besides keep up the website, facebook pages, and blogs through which we provide honest information about MSG to those who value it. For recreation, she writes.

I handle most of the questions that come through e-mails and phone calls, and when the opportunity arises, I’ll give an interview. That, in itself, takes a major portion of each day.

Much of the rest of my day is given to grocery shopping and cooking. When I was forced to retire, I took up cooking—and if I do say so myself, I’m very good in the kitchen. I must admit, however, that I have a great advantage over others, for I’m forced to use fresh, wholesome fruits and vegetables, and meat, poultry, fish, and seafood that’s not been adulterated with chemicals.

We haven't seen anything of Andrew Ebert lately. I'd guess he's still drawing a salary. He's invaluable. After all, the man has a network of friends in places like the AMA, ADA, WHO and EU, and his golf games with friends in those places wouldn't make the headlines. In July 2011, I saw a piece on the IFT Food Additives website indicating that Ebert was chair of the Food Chemical Codex Food Ingredients' Expert Committee.

Steve Taylor, longtime spokesperson for the glutamate industry, is still an IFT member. He still serves as director of The Food Allergy Research and Resource Program (FARRP), which, according to the program of the IFT's 2011 Annual Meeting and Food Expo, fills a distinct void in the area of allergenic foods. "FARRP is a 14-year partnership between food industry and the University of Nebraska employing comprehensive, sound and thorough approaches to food safety. Current assays developed and available for confidential analysis include almond, cashew, clam, crustacean, egg, gluten, lupine, hazelnut, mustard, peanut, pecan, milk, sesame, soy and walnut. FARRP offers training, workshops and consultation on processing issues and regulatory aspects of allergenic foods and food ingredients, has an extensive food allergy database and works with leading researchers to improve the safety of food products globally." Taylor's bio doesn't mention MSG or that Ajinomoto and/or the IGTC are his other employers.

Every once in a while, an intrepid researcher will complete a study that demonstrates MSG is toxic. Even if the researcher finds a journal to publish the study, there will be virtually no mention of it in major media. Hermanussen and He are among the names you won't see.

The misinformation spewed forth by the industry remains unchallenged:

- The FDA/industry claims that the glutamic acid found intact in protein is identical to manufactured free glutamic acid, ignoring the fact that when amino acids are manufactured, impurities (not present in intact protein) are invariably produced.
- As "proof" that its products are safe, the glutamate industry points to studies in which the number of subjects who react to monosodium glutamate is roughly the same as the number of subjects who react to a placebo that contains hydrolyzed protein products, autolyzed yeast, other MSG-containing ingredients, and/or aspartame. "Fail to confirm..." is the terminology they use.

- Moreover, while the industry's friends at the FDA accept these badly flawed studies as proof of the safety of MSG, consumer reports of adverse reactions following ingestion of MSG are dismissed as anecdotal.
- The FDA/industry claims that just a little bit of MSG won't hurt anyone. (The fact that just a little bit of peanut can kill a peanut-sensitive child isn't considered.)
- The FDA/industry claims that MSG reactions are mild and transitory, occurring within two hours after its ingestion. Research that says otherwise is ignored.

Dirty tricks continue in new or slightly modified form:

- Every now and then, an obvious glutamate industry-sponsored person (often a "student") e-mails the Truth in Labeling Campaign for the purpose, it would seem, of provoking a fight. I answer questions truthfully and am careful not to say anything that might be taken out of context and somehow be used to discredit me. I'm always careful to note that I'm pleased to share what I've learned over the years, but I'm not a physician.
- The best trick, if it was a dirty trick, was played by Ted and Melissa. Adrienne hired them to redo our website, which could stand to be improved. They agreed on financial arrangements in fall 2010, and began redesigning the site a couple of months later. They were to give it a new look and install a new navigation system, but leave the text largely as it was. Adrienne would approve each piece of the package they presented as they moved along.

For a couple months, Ted, Melissa, and Adrienne worked comfortably together. Then, in an unexplainable turnaround, Ted and Melissa began telling Adrienne what she was to do and when she was supposed to produce the work they needed to move forward. They also began to demand payment, which they had previously agreed would be made when the site was completed.

Frustrated, and unable to get more than inappropriate demands from Ted and Melissa, Adrienne determined to take the problem to arbitration as stipulated in their original contract. Would you

believe the address needed to have arbitration papers served in San Diego County couldn't be found? Even the address on file with the state related to the incorporation of Ted and Melissa's company turned out to be false.

Adrienne was able to find Melissa on the Internet. Her family lived in the San Diego area, but she didn't seem to live with them. Melissa took college courses in San Diego, too, but the school wouldn't give Adrienne an address.

Ted was more difficult to trace. In surfing the web, however, using clues Adrienne had picked up in various conversations, she found a picture of Ted and a description of the work he'd done at the University of Wisconsin—but the name attributed to the face was Ted Durkee not Ted Bradley, the name by which we'd known him.

Dirty trick? Maybe not. But what else could it have been? This couple was to collect a couple thousand dollars at the end of the project. They'd worked with Adrienne amiably up to a point, and then the atmosphere had changed. Do I know for a certainty that this was a dirty trick? No, I don't, but I can't help but believe that Ajinomoto or the IGTC would pay someone a hefty sum to make a mess of our website, or if not that, prevent its improvement. I can't imagine this young couple would give up a couple thousand dollars and leave us in the lurch for no reason at all.

- Confusion seems to be an ongoing goal of the glutamate industry. We were, therefore, suspicious when a group called "Citizens to Label Genetically Engineered Food" changed its name to "Truth in Labeling Coalition" and engaged in fundraising.
- We know there are agents of the glutamate industry who pretend to be concerned about the toxic effects of MSG. These people are building reputations as being concerned about MSG toxicity, but when the glutamate industry starts its next offensive, they'll invariably declare to their readers, web followers, and the media that they made a mistake in saying there was need to be concerned about adverse reactions from MSG. They'll say to all who'll listen that MSG is safe. Or they'll say that it would be great if the FDA would require labeling all products that contain more than 3 grams of MSG. You might think of them as double agents, being paid by one side only.

Are our phones still bugged, if they ever were? Maybe yes, maybe no. I doubt we maintain threat status with the glutamate industry. But I know that bugging us—our phones, houses, cars, computers, and things I haven't even thought of—wouldn't be a drop in their anti-exposure bucket. Ajinomoto Co., Inc., is a multi-billion dollar company.

We're proud of our accomplishments, few though they may be. Awareness of the toxic potential of MSG is growing. Not growing enough, but growing. Our website, our facebook pages, and our blogs are helping MSG-sensitive people understand MSG's toxic potential and avoid it. We've never made a penny from all we've done, but we've earned the respect of those who we've been able to help by minimizing their reactions to MSG; their notes of thanks are payment enough.

We now understand that kinesiology can be used as a tool by people who are sensitive to MSG (or any other chemical) to warn them against consuming food, pharmaceuticals, or dietary supplements that contain it. We've begun trying to share that information, and the FDA hasn't yet figured out a way to prevent consumers from using that knowledge.

We're cognizant of our failures.

- Not all MSG in processed food is identified on product labels. Only "monosodium glutamate," one of more than 40 common MSG-containing ingredients, gives even a clue to the presence of MSG.
- Instead of being banned, Auxigro has gone international. Interchem (and possibly other distributors) now distribute it worldwide.
- It continues to be increasingly difficult for me to eat. For all intents and purposes, anything made with wine is made with grapes sprayed with Auxigro. Therefore, if an Italian, French, or Spanish restaurant prepares dishes with wine or uses wine sauces, chances are I won't be able to tolerate them.
- Instead of being banned, No MSG labels are proliferating.

We've learned a great deal on this journey. Possibly the saddest has been the fact that all too many people willingly sacrifice principles for money. Included are the people who go on and on about pure foods and preventive medicine—talking the good talk about avoiding MSG while personally profiting from sales of dietary supplements with binders and fillers that contain neurotoxic MSG and/or neurotoxic aspartic acid, and sales of protein drinks that contain neurotoxic MSG, neurotoxic aspartic acid (as in aspartame), and neurotoxic L-cysteine.





## Epilogue

When I was young, I lived in a world of wonder and privilege. I sneaked a peek at the half-nude African natives in my father's *National Geographic* magazines, but read nothing of their hardships. I traveled through the southern U.S. and saw signs that said "No Blacks" and "No Jews," but we, who were Jews, always had a place to stay so those signs meant nothing to me. I was born in a hospital and lived in a brick two-story house with my brother, sister, parents, and housekeeper. My father belonged to a country club. I knew nothing of the millions of others who didn't have such things.

With Jack's disability, a whole new world came into focus. Before I came to know the people who were purposely pouring toxins into our food supply, I couldn't understand why it was that Catholic friends would go to confession, and why, every year on Yom Kippur, we were given the opportunity, and indeed urged, to repent for our sins. Once we were introduced to Hattan and his colleagues at the FDA and their friends at The Glutamate Association and the IGTC, I began to understand the role of confession as it was being used by the dishonest, unethical, and/or immoral people who sin, confess, and sin again. I became aware of a whole world of people for whom sin was a way of life—confession or not.

When I was an undergraduate, I worked 20 hours a week in Northwestern University's psychology department, running experiments for faculty members. As a graduate student, I became a research assistant, again doing research for faculty members. Research as I knew it involved finding answers to questions to add to a particular field's knowledge base.

Following Jack's disability, I learned the world of research had changed. There were, to be sure, researchers searching for answers to add to the base of knowledge, but there were also those who turned out reports to prove whatever their handlers demanded of them. It was hard enough to accept the fact that my colleagues would take employment with companies that required them to prostitute themselves, but there were others who held positions at colleges and universities. Yes! And medical schools! The schools themselves gave these researchers permission to use their facilities for a fee referred to as "overhead."

The University of Iowa was the first such institution I encountered. A cadre of researchers led by Dr. Lloyd Filer, Mead-Johnson Professor in the Department

of Pediatrics, claimed their research demonstrated that both monosodium glutamate and aspartame were harmless food additives.

Today I know what I saw in 1989-1990 was just the tip of the iceberg. Today, the air we breathe, the earth that sustains the bulk of our food supply, the water that sustains what's left of the fish population, and the water we're given to drink are all polluted, and that pollution is ongoing and growing. Much that's done in the name of moderating the effects of that pollution consists of applying toxic chemicals to air, earth and water.

Today, universities like the University of California at Davis are turning out scores of food technologists, some of whom make their livings inventing novel ways to substitute chemicals for foods, as cost-cutting measures. MSG and aspartame are the products I know best. Both contain neurotoxic amino acids that cause brain lesions and subsequent endocrine disorders when fed to the very young, and cause adverse reactions for all ages. These toxic products, plus others, are being poured into food, pharmaceuticals, dietary supplements, cosmetics, and infant formula—without restriction except for something called “good manufacturing practices.” I find it fascinating—and a tribute to the power of the food and drug industries—that the cost of healthcare is ostensibly of great concern to our president and Congress, while the cost of pouring toxins into food isn't even considered.

As this is written, the FDA is on record as saying that consumers don't have the right to know what's in their food. Its words have been reinforced by actions taken against small producers and those who'd use their products—none of which have been shown to be harmful. Such products are made without chemical toxins; they might promote health and wellness in the individuals who use them, and thus possibly cut into the profits of the pharmaceutical industry.

On the other hand, the FDA has approved the use of microparticulated chemical products in food. They're being advertised to industry as products to facilitate salt reduction, sugar replacement, MSG replacement, reduction of bitter taste in various food additives, and more. They've never been tested for safety, haven't been awarded GRAS status by the FDA, and will never be identified on the labels of foods in which they're used. The FDA has been asked by industry to allow it to classify these 100 percent chemicals as “natural flavors,” instead of what they're known as now, “artificial flavors.” Consumers will never know what they're ingesting, because these chemicals can be used in food, cosmetics, dietary supplements, and pharmaceuticals without disclosure.

But there's more to be considered than simple profits. There are the players. There are those who are orchestrating this pollution of our society, and those who enable it. Industry has built a system for ensuring its goals. It includes

control of the regulators (both elected officials and regulatory agencies) and control of the media, which might otherwise expose what's being done by industry to the public. Industry has infiltrated every facet of our society: medical and regulatory. It's built a lobbying system that delivers funds to legislators, and rewards both legislators and agency staff with perks about which both exposés and novels have been written.

Today, human health and safety are being sacrificed for industry profits. While each industry reaps profits from its own contribution to pollution, be it pollution of the air, water, earth, or food, there's one industry—the pharmaceutical industry—that profits from it all.

Read the medical literature. There are a handful of researchers doing basic research. The rest are working on developing drugs to treat disease. Few, if any, work on preventing disease—unless prevention is cast in the form of a drug or vaccine (all with side effects) produced and sold by the pharmaceutical industry.

Today, those who promote use of vitamins, minerals, or other truly natural dietary supplements are being vilified. The FDA and/or USDA inspectors harass small organic farmers. Those who've treated diseases like cancer with far greater success than the mainstream medical community are hassled and intimidated. Anything that might cut into the profits of the pharmaceutical industry, be it simply providing healthy food to consumers, is being attacked, while toxic vaccines that have no track record of safety are being forced on our children.

Sometimes, when I lie in bed I think about these things, and wonder if the greedy are so greedy that they'll feed their own children and grandchildren food into which toxic chemicals have been poured. I think of dictators who are criticized for killing their own people. I wonder how different that is from the maiming and killing of Americans, done by those who pollute the air we're given to breathe and the food we're given to eat.



## **In Memoriam**

On November 15, 2011, Jack suffered a massive heart attack. He died on January 15, 2012 from heart damage exacerbated by complications caused by MSG—MSG in the electrode tabs applied to his skin; MSG in the dextrose solution used to deliver the drugs that would crystallize in the non-MSG Ringer's solution; and MSG in the starch, cornstarch, and carrageenan components of the medications given to him when the IVs were withdrawn. Had the FDA not lied about the toxic potential of MSG, had the medical community not believed them, had the MSG in the solutions and meds been identified on product inserts, Jack might be alive today. Had Jack not spent half of the last quarter of his life fibrillating following ingestion of MSG hidden in food, he might not have had the heart attack in the first place.



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## Appendix 1

### Selected MSG animal safety studies demonstrating negative results

Study	Publication	Research Site	Funding source	Allege to replicate	Of particular interest
Abraham <i>et al.</i> (1971) <sup>1</sup>	Exp Mol Pathol	Albany Medical College	NIH (Monosodium glutamate provided by Ebert or IMC)	yes	Brain damage found in control animals.
Abraham <i>et al.</i> (1975) <sup>2</sup>	Exp Mol Pathol	Albany Medical College	NIH	yes	
Adamo <i>et al.</i> (1970) <sup>3</sup>	Science			yes	
Anantharaman* (1979) <sup>4</sup>	<i>Glutamic Acid: Advances in Biochemistry and Physiology</i>	Nestle	Nestle	yes	The basal diet contained MSG
Arees <i>et al.</i> (1970) <sup>5</sup>	Science			yes	
Bunyan <i>et al.</i> (1976) <sup>6</sup>	Br J Nutr	Huntingdon Research Centre	(by contract)		
Ebert (1970) <sup>7</sup>	Toxicol Appl Pharmacol	IGTC IMC	IGTC		
Heywood <i>et al.</i> * (1977) <sup>8</sup>	Toxicol Lett	Huntingdon Research Centre	(by contract)		
Heywood <i>et al.</i> * (1979) <sup>9</sup>	<i>Glutamic Acid: Advances in Biochemistry and Physiology</i>	Huntingdon Research Centre	(by contract)		
Huang <i>et al.</i> (1976) <sup>10</sup>	Nutr Rep Intern				
Iwata <i>et al.</i> (1979) <sup>11</sup>	Toxicol Lett	Ajinomoto, Japan	Ajinomoto		
Lengvari (1977) <sup>12</sup>	Acta Biol Acad Sci Hung				
Matsuzawa <i>et al.</i> (1979) <sup>13</sup>	Toxicol Lett	Ajinomoto, Japan	Ajinomoto		
Newman <i>et al.</i> (1973) <sup>14</sup>	Toxicology	Huntingdon Research Centre	(by contract)	yes	
Oser <i>et al.</i> (1971) <sup>15</sup>	Nature	Food & Drug Research Lab	(by contract)	yes	
Owen <i>et al.</i> (1978) <sup>16</sup>	Toxicol Lett	Huntingdon Research Centre	(by contract)		
Owen <i>et al.</i> (1978) <sup>17</sup>	Toxicol Lett	Huntingdon Research Centre	(by contract)		
Prabhu <i>et al.</i> (1971) <sup>18</sup>	Arch Int Pharmacodyn				
Reynolds <i>et al.</i> * (1971) <sup>19</sup>	Science	U of IL; U of Iowa	Gerber, IMC	yes	

Study	Publication	Research Site	Funding source	Allege to replicate	Of particular interest
Reynolds <i>et al.</i> * (1976) <sup>20</sup>	J Toxicol Environmental Health	U of IL; U of Iowa	Gerber; IMC		
Reynolds <i>et al.</i> * (1972 abstract) <sup>21</sup>	J Neuropath Exp Neurol (Abstract)	U of IL; U of Iowa	Gerber; IMC	yes	
Semprini <i>et al.</i> (1974) <sup>22</sup>	Nutr Metabol	Nat'l Institute of Nutrition, Rome			
Semprini <i>et al.</i> (1974) <sup>23</sup>	Biomedicine	Nat'l Institute of Nutrition, Rome			
Stegink <i>et al.</i> * (1975) <sup>24</sup>	Am J Physiol	U of IL; U of Iowa	Gerber; IMC	yes	
Stegink <i>et al.</i> (1975) <sup>25*</sup>	Am J Obstetrics Gynecology	U of IL; U of Iowa	Gerber; IMC		
Takasaki <i>et al.</i> (1979) <sup>26</sup>	<i>Glutamic Acid: Advances in Biochemistry and Physiology</i>	Ajinomoto, Japan	Ajinomoto		
Takasaki Y. (1978) <sup>27</sup>	Toxicology	Ajinomoto, Japan	Ajinomoto		
Takasaki Y. (1978) <sup>28</sup>	Toxicology	Ajinomoto, Japan	Ajinomoto		
Takasaki Y. (1979) <sup>29</sup>	Toxicol Lett	Ajinomoto, Japan	Ajinomoto		
Takasaki Y. (1980) <sup>30</sup>	Toxicol Lett	Ajinomoto, Japan	Ajinomoto		
Takasaki <i>et al.</i> (1979) <sup>31</sup>	Toxicol Lett	Ajinomoto, Japan	Ajinomoto		
Trentini <i>et al.</i> (1974) <sup>32</sup>	Fertil Steril	Istituto di Anatomiae... Modena			
Wen <i>et al.</i> (1973) <sup>33</sup>	Am J Clin Nutr	Harvard	PHS; Harvard		

IFIC, International Food Information Council; IMC, International Minerals and Chemical Corporation

\*One or more of these authors contributed to *Glutamic Acid: Advances in Biochemistry and Physiology*



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## Appendix 2

### Selected MSG human safety studies demonstrating negative results

Study	Funding sources	Subjects recruited	Bias toward reducing reactions to monosodium glutamate test material	Information given about placebos	Number of subjects	Focus on irrelevant variables
Altman <i>et al.</i> (1994)	Allerx IGTC	With stipend	Selected reactions recorded  no other information	Liquid vehicle		
Bazzano <i>et al.</i> (1970)	Public Health Service	Adult males	Selected reactions recorded  no other information	Amino acid formula with glutamate as a basic diet	11	Neurologic function; Hepatic function; Serum cholesterol; Weight
Fernstrom <i>et al.</i> * (1996)	IGTC  NIH	Well subjects  Giving informed consent		Beverage <sup>1</sup>	8	Plasma glutamate; Change in plasma glutamate; Pituitary hormone secretion.
Geha <i>et al.</i> (2000)	IGTC	Stipend  Giving informed consent	Used capsules  Selected reactions recorded  Inadequate observation time	Part 1: "Citrus-flavored beverage." <sup>2</sup>  Part 2: Capsules containing sucrose		Reproducible response; <sup>3</sup>  Pulse; Blood pressure; Respiratory rate;  Relative risk
Germano <i>et al.</i> (1991)	no information given	Asthmatic and non-asthmatic adults	Limited reactions recorded  Used capsules		13+30  1	
Germano <i>et al.</i> (1993)	no information given	Adults with a history of asthma	Selected reactions recorded  Used capsules		21  10	
Goldschmiedt <i>et al.</i> (1990)	Ajinomoto; NIH; ILSI; VA	Well subjects  Giving informed consent		180 mL warm beef consommé soup supplied by Ajinomoto Co., Inc. Tokyo	17  15	variables were relevant to the study done, but irrelevant to adverse reactions to MSG

Study	Funding sources	Subjects recruited	Bias toward reducing reactions to monosodium glutamate test material	Information given about placebos	Number of subjects	Focus on irrelevant variables
Kenney* (1979) Part 1.	IGTC (with thanks to NESTEC)	Well subjects  Giving informed consent	Test material given with carbohydrates  Selected reactions recorded  Inadequate observation time	Tomato juice with common salt.	51  16	
Kenney* (1979) Part 2.	IGTC	Giving informed consent	Inadequate observation time	Sucrose; citric acid; trisodium-citrate; lemon flavor; caramel color; naringin.	57 16	
Kenney (1986)	IGTC		Selected reactions recorded	"...soft-drink solution...."	6	Objective parameters (routine chemical analyses)
Kerr <i>et al.</i> (1979)	Ajinomoto USA	Randomly drawn stratified random sample	Selected reactions recorded  Inadequate observation time	(survey)		
Morselli <i>et al.</i> * (1970)	COFAG (IGTC Europe)	Well subjects	Test material was given with carbohydrates  Inadequate observation time	Beef broth (ingredients not specified)	24	Blood pressure; Pulse; Respiration rate
Prawirohardjono <i>et al.</i> (2000)	IGTC	Well subjects  With stipend  Giving informed consent	Small amounts of test material were given with carbohydrates  Used capsules	Lactose in gelatin capsules	52	Blood pressure; Pulse; Respiratory rate
Rosenblum <i>et al.</i> (1971)	no information given	Males  Giving informed consent	Selected reactions recorded  Inadequate observation time	Diluted chicken stock or diluted chicken stock with sodium (ingredients not specified)	95	

Study	Funding sources	Subjects recruited	Bias toward reducing reactions to monosodium glutamate test material	Information given about placebos	Number of subjects	Focus on irrelevant variables
Schwartzstein (1987)	IGTC	Asthmatics	Not all reactions were recorded  Used capsules  Medication not given for 12 hours prior to testing	Gelatin capsule containing sodium chloride	12	
Simon (2000)	IGTC	Patients with chronic urticaria;	Subjects taking antihistamine; Used capsules; Dose was 2500 mg.			
Stegink <i>et al.</i> * (1986)	IGTC	Giving informed consent	Test material was given with carbohydrates	Beef consommé supplied by Ajinomoto Co., Tokyo, Japan	8	Plasma glutamate; Plasma aspartate
Stevenson <i>et al.</i> (1997)	IGTC	CRS-asthmatics and non-CRS asthmatics  Some subjects eliminated	Selected reactions recorded		10+30	
Tanphaichitr <i>et al.</i> (1983)	IGTC	Well subjects	Selected reactions recorded  Test material was given with carbohydrates	Four full days' menus all different, without added monosodium glutamate	50	Plasma glutamate; Pleasantness or unpleasantness of food
Tanphaichitr <i>et al.</i> (1985)	IGTC	Well subjects	Selected reactions recorded  Test material was given with carbohydrates	A full day's menu without added monosodium glutamate	12	

Study	Funding sources	Subjects recruited	Bias toward reducing reactions to monosodium glutamate test material	Information given about placebos	Number of subjects	Focus on irrelevant variables
Tarasoff <i>et al.</i> (1993)	IGTC	Well subjects With stipend Giving informed consent	Used capsules Test material was given with carbohydrates Not all reaction were recorded Inadequate observation time	Both beverage and capsules:  Beverage specified as containing aspartame; <sup>4</sup> prepared from powders supplied by the IGTC  Placebos in gelatin capsules		After-taste; Intensity
Wilkin (1986)	VA	Well subjects	Selected reactions recorded	(No placebo)	6	
Woods <i>et al.</i> (1998)	The Asthma Foundation of Victoria	Asthmatics who perceived that MSG made their asthma worse	Subjects continued on medications  10 capsules rolled in lactose powder per treatment	5 gm lactose in 10 capsules rolled in lactose powder	12	
Woessner <i>et al.</i> (1999)	IGTC; Scripps Clinic, Green Hospital & Research Institute	Asthmatics with and without CRS  Giving informed consent  Some subjects eliminated	Selected reactions recorded  Test material was given with carbohydrates  Continued medications	5 gelatin capsules containing sucrose	30+70  30	



Study	Funding sources	Subjects recruited	Bias toward reducing reactions to monosodium glutamate test material	Information given about placebos	Number of subjects	Focus on irrelevant variables
Yang <i>et al.</i> (1997)	IGTC	Well subjects (except subjects with symptoms of CRS were accepted)  With stipend  Giving informed consent	Selected reactions recorded  Two or more reactions required to be counted as a reaction  Inadequate observation time	Strongly citrus tasting beverage containing sucrose supplied by the IGTC	61  36	
Zanda (1973)	no information given	Well subjects	Selected reactions recorded  Inadequate observation time  Small amounts of test material were given with carbohydrates	Beef bouillon (ingredients not specified)	72	Blood pressure; Pulse rate

\*One or more of these authors contributed to *Glutamic Acid: Advances in Biochemistry and Physiology*

## LEGEND

### FUNDING SOURCES:

COFAG: IGTC Europe

IGTC: International Glutamate Technical Committee (includes manufacturers and users of monosodium glutamate)

ILSI: International Life Sciences Institute (often under contract to the glutamate industry)

IMC: International Minerals and Chemical Corporation

NIH: National Institutes of Health

VA: Veterans Administration

BIAS IN SELECTING SUBJECTS (Not all people are sensitive to monosodium glutamate at levels ordinarily found in food.)

CRS: Chinese Restaurant Syndrome: a limited number of mild and transitory reactions reported in 1968 as being caused by ingestion of monosodium glutamate

INFORMED CONSENT, while ethically appropriate, and required of all experiments using human subjects, biases these studies.

MALES have been reputed to be less sensitive to MSG than females

STIPENDS were given to those who claimed to be sensitive to MSG

SUBJECTS were ELIMINATED prior to the study for responding to placebos that were going to be used in the study.

WELL SUBJECTS would be persons who had never experienced any of the reactions alleged to be attributable to use of monosodium glutamate (irritable bowel, migraine headache, asthma, skin rash, heart irregularities, mood swings, and depression being possibilities, for example).

## BIAS TOWARD REDUCING THE LIKELIHOOD THAT SUBJECTS WOULD REACT TO MONOSODIUM GLUTAMATE TEST MATERIAL

CAPSULES guarantee slow release and, therefore, less effect of the material they contain

TEST MATERIAL GIVEN WITH CARBOHYDRATES interferes with the uptake of the test material

PLACEBOS (It would appear that in most, if not all, glutamate-industry-sponsored studies, both test and placebo material were supplied by the IGTC. According to a 1991 letter from IGTC chairman Andrew G. Ebert to LSRO-FASEB and the FDA, a beverage mix designed to mask the taste of [monosodium glutamate], was modified in 1978 to replace the [former use of] sucrose with the low calorie sweetener Aspartame. Prior to the time that Northwestern University was alerted to the fact that aspartame was being used in placebo material being used in an IGTC sponsored study being carried out by Geha et al. at Northwestern, Harvard, and UCLA, the use of aspartame in placebos was not acknowledged in research reports.

BEVERAGE: Citric acid, trisodium citrate, lemon flavoring, caramel coloring, naringenin-7-rhamnosidic-glycoside (grapefruit bitter principle), sodium saccharin; prepared by Ajinomoto

CITRUS-FLAVORED BEVERAGE: Sodium citrate, citric acid, saccharin, citrus flavor, and naringin were cited as ingredients. Aspartame was used (but not named) with the other ingredients prior to objections filed with Northwestern University by the Truth in Labeling Campaign.

BEVERAGE: Sodium citrate dihydrate, citric acid monohydrate, potassium chloride, naringin, grapefruit flavour, caramel, and aspartame.

## IRRELEVANT VARIABLES

REPRODUCIBLE RESPONSE: Repetition of the same two or more responses to monosodium glutamate on two occasions, and no response to the “placebo” (which contained aspartame).

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## Appendix 3

Names of common ingredients that contain processed free glutamic acid (MSG)<sup>1</sup> or create MSG during processing

<b>Names of ingredients that always contain processed free glutamic acid:</b>	<b>Names of ingredients that often contain or produce processed free glutamic acid during processing:</b>	<b>The following are ingredients suspected of containing or creating sufficient processed free glutamic acid to serve as MSG-reaction triggers in HIGHLY SENSITIVE people:</b>
Glutamic acid (E 620) <sup>2</sup> Glutamate (E 620) Monosodium glutamate (E 621) Monopotassium glutamate (E 622) Calcium glutamate (E 623) Monoammonium glutamate (E 624) Magnesium glutamate (E 625) Natrium glutamate Anything "hydrolyzed" Any "hydrolyzed protein" Calcium caseinate, Sodium caseinate Yeast extract, Torula yeast Yeast food, Yeast nutrient Autolyzed yeast Gelatin Textured protein Whey protein Whey protein concentrate Whey protein isolate Soy protein Soy protein concentrate Soy protein isolate Anything "protein" Anything "protein fortified" Soy sauce Soy sauce extract Protease Anything "enzyme modified" Anything containing "enzymes" Anything "fermented" Vetsin Ajinomoto Umami	Carrageenan (E 407) Bouillon and broth Stock Any "flavors" or "flavoring" Maltodextrin Citric acid, Citrate (E 330) Anything "ultra-pasteurized" Barley malt Pectin (E 440) Malt extract Seasonings	Corn starch Corn syrup Modified food starch Lipolyzed butter fat Dextrose Rice syrup Brown rice syrup Milk powder Reduced fat milk (skim; 1%; 2%) Most things "low fat" or "no fat" Anything "enriched" Anything "vitamin enriched" Anything "pasteurized" Annatto Vinegar Balsamic vinegar Certain amino acid chelates  (Citrate, aspartate, and glutamate are used as chelating agents with certain mineral supplements.)
(1) Glutamic acid found in <b>unadulterated protein</b> does not cause adverse reactions. To cause adverse reactions, the glutamic acid must have been processed/manufactured or come from protein that has been fermented.		
(2) E numbers are use in Europe in place of food additive names.		

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## About the Author

Adrienne Samuels, Ph.D., was the wife of MSG activist Jack Samuels. Mother and grandmother, she is an experimental psychologist by training, and educational psychologist by degree. She holds a B.S. degree from Northwestern University where she graduated with distinction and departmental honors. She won her Ph.D. degree from the University of Wisconsin, Madison where she studied with Chester Harris and Julian Stanley, both statisticians.

In 1988, in an attempt to better understand the etiology of Jack's life-threatening sensitivity to man-made glutamic acid (MSG), Adrienne undertook an investigation of the literature on MSG toxic reactions in animals and adverse reactions in humans, finding that MSG is a neurotoxin and endocrine disruptor, and that industry studies which claim otherwise are all badly flawed. She has written extensively to the FDA and to various members of the Congress. She has testified before the Advisory Committee on the Food and Drug Administration and submitted testimony to the Federation of American Societies for Experimental Biology, Life Sciences Research Office on the "Evaluation of the Safety of Amino Acids and Related Products," and on the "Analysis of Adverse Reactions to Monosodium Glutamate (MSG) FDA Docket No. 92N-0391;" and was a plaintiff in the law suit Truth in Labeling Campaign, et al., Plaintiffs vs. Donna Shalala, et al., Defendants, brought to require that MSG in processed food be identified on product labels. She has authored *"MSG: A Review of the Literature and Critique of Industry Sponsored Research,"* *"MSG and the FDA: Historical Perspective,"* *"MSG: Food for Thought but Not for Eating,"* *"The Toxicity/Safety of Processed Free Glutamic Acid (MSG): A Study in Suppression of Information;"* co-authored *"MSG: The Truth and Consequences;"* and written a number of shorter letters and papers. She is co-founder and director of the Truth in Labeling Campaign.