

# An Interview with T. Colin Campbell, Ph.D.

by Mark Huberman



For more than 40 years, **Dr. T. Colin Campbell** has been at the forefront of nutrition research. His legacy, “The China Project,” is the most comprehensive study of health and nutrition ever conducted. Dr. Campbell is the Jacob Gould Schurman Professor Emeritus of Nutritional Biochemistry at Cornell University. He has more than 70 grant-years of peer-reviewed research funding and authored more than 300 research papers. In addition, he is coauthor, with Thomas Campbell, M.D., of the bestselling book, *The China Study: Startling Implications for Diet, Weight Loss and Long-term Health* and wrote the *New York Times* bestseller, *Whole: Rethinking the Science of Nutrition*, with Howard Jacobson, Ph.D.

**Nearly everyone in the whole-food, plant-based health movement has read your book, *The China Study*, and is familiar with your groundbreaking research. But an important part of your history that few people are likely to be aware of is the difficult health problem you were experiencing that affected your speech.**



You are so right, Mark. Between 1963 and 1965 I was working at MIT on a project to isolate the toxic chemical in feed oil that was being added to poultry feed. I was given two five-gallon drums of the suspect oil to work with. It turned out later that what I was working on for two years was dioxin—the toxic agent contained in Agent Orange.

After leaving MIT, and for some years thereafter, I suffered from a condition known as “chloracne” as well as bleeding migraines. One thing led to another and I finally started to lose my ability to physically speak, and I had to quit lecturing for a while. I had met with many doctors to seek some relief. The head of neurology at Cornell Medical School told me that I probably wouldn’t be speaking at all in another year. The head of neurology at the Columbia Presbyterian told me I had a condition called “dystonia” and that it was pretty bad. He said the only thing he could suggest doing was to carry a penknife around with me so I could do an emergency tracheotomy on myself. They

demonstrated to me how to do this because they thought I could possibly choke to death.

**How did the NHA and its hygienic physicians come into the picture?**

My fortunes turned in 2007 when I got a call from Jerry Deutsch, your association’s president at the time. He wanted to know if I’d speak at the National Hygiene Conference about the research we had conducted in China and that was being featured in *The New York Times* and other prominent



At the 2007 NHA Conference at the Regency Hotel in Florida, Dr. Campbell lectures about the research he had conducted in China.

media. I said, “Jerry, I can’t really talk. I have a difficult problem and I’m trying to resolve it.” He replied, “Well, I tell you what. Why don’t you come down anyhow; I think you’ll find some of our doctors, who are involved in an alternative approach to medicine, helpful.”

So I went to the conference, struggled through my talk, and then was ushered into a room where I met with about 10 of these doctors. I don’t recall all of

them, but two that stood out were Dr. Alec Burton from Australia and Dr. Alan Goldhamer from California. They had a look at me, talked to me, and then arranged for me to go out to Alan's TrueNorth Health Center to do a water fast. While it all seemed pretty foreign to me, I thought, "Well, why not; I had tried everything else!"

Fasting made some sense to me because the Canadian Food and Drug lab had tested my blood and determined that I had levels of dioxin that were still exorbitantly high. I felt that fasting might allow my body to rid itself of that nasty stuff; sort of like a detox program. I remember telling Alan, "I just don't quite believe this, but I'll do it." I was very impressed with Alan, who I felt had really acquired a masterful understanding of medical and nutritional science. He was young, but I was very impressed with his capability, his sincerity about science, and his integrity. We quickly became good friends.

One thing that impressed me was that Alan had a number of patients at his clinic who were suffering from some pretty serious problems but who were also experiencing some very positive results. When patients finish fasting, they are fed a plant-based diet. I, in turn, from a research perspective, had already begun embracing plant-based eating, but to observe it being individually applied was very impressive. I also respected that Alan was looking at health care from a researcher's point of view. I thought to myself, "Boy, there's something here. This is pretty exciting."

### How long did you fast?

The first time was only for 12 days. I personally didn't see a lot of benefit at the time, but when I came home my wife Karen told me she thought I was definitely better. Alan followed up and suggested I come back a second time since, he said, it can take more time for something like this. So I went back about a year later and fasted for another 10 days. I also became even more serious about the whole-food, plant-based diet Alan was teaching.

Amazingly, about four to six months later, all of a sudden my body started to repair itself, and I regained the ability to speak that I thought I had lost. By the way, my wife went with me during my second fast to see if she could gain relief from an asthma problem she had suffered for several years. She got rid of her problem and still is without it to this day!



*Pictured left to right: Jim Lennon, Colin Campbell and Mark Huberman in 2007.*

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been aware of water fasting. But I can speak from personal experience what a great benefit it all was for me.

**From my many years in this health movement, one of the things I have observed is that fasting often triggers the healing process, and when you adopt a truly whole-food, minimally processed, plant-based diet, the healing process continues. It seems that you marshal your body's internal capacities to repair and rejuvenate.**

You said it perfectly. That's exactly what I think happened in my case. I was the new guy on the block, in a sense, and hadn't really

### **I imagined you gained a whole new world of colleagues as well?**

I did. All of a sudden I felt like I was getting outside of traditional science, even though I had spent many years in more traditional thinking.

### **Have you been to the new TrueNorth Health Center or were you at the one in Penngrove?**

I was at Penngrove the first two times, but then later I went to the Santa Rosa facility, which was about six or seven years ago.

Alan has developed a fantastic program, and he's always had really competent people at the Center, like Drs. Erwin Linzner, Peter Sultana, Michael Klaper, and a number of others for whom I have great respect.

### **The China Study was certainly a groundbreaking book, but was it the 2011 documentary film *Forks Over Knives* that really put you on the map?**

I don't know. You may know that *Forks Over Knives* really started when the producers, Brian Wendel and Lee Fulkerson, came to hear me lecture at John McDougall's Advanced Study Weekend. They took me aside and told me they were thinking about making a movie and wanted to know if I would consider being a part of it. Brian had read *The China Study* and heard me lecture. I told them about Dr. Caldwell Esselstyn, and they went to hear him lecture, and that is when Essy and I were interviewed for the film. It really proved to be a groundbreaking documentary that has done extremely well and still does today. In fact, just yesterday I was in a grocery store here in North Carolina when a man stopped me because he recognized me from the film. I get stopped a lot because of it.

## **I have read that you don't identify yourself as a vegetarian or a vegan. Why is that?**

No, I don't and here's why. For obvious reasons, I greatly respect and welcome all the support that has come my way from the vegan and vegetarian communities. However, I did all my research without even knowing the words "vegetarian" and "vegan." I started to learn about vegetarianism in the 1980s, but my conclusions about health were based on the human health characteristics of diet from the nutrient composition point of view. I was looking at how nutrients, such as protein and fat, work in the body, and how much is too much or too little. My focus was on the mechanisms created in the body and that sort of thing. So it was all science. I didn't come into this because I had any preference for eating a certain way.

## **And there was no "ism" about it?**

No "ism" about it. It was all strictly science. I knew that a lot of the people in the vegan and vegetarian communities came to their points of view for ethical, environmental, and other good reasons that I have come to respect. But then many vegetarians were still eating dairy, eggs, and sometimes fish. When considering the nutrient composition of their diets, you can say that these diets are a little better but not that much better than, say, the traditional American diet. And that's what we've seen in the literature.

When vegetarian communities are compared with non-vegetarian communities, there certainly are some health advantages. Vegan groups are not into using any kind of animal products for any purpose. So you would think that they should be even better than the vegetarians, and they are. However, vegans tend to only be a bit better than vegetarians in most of the results that I've seen. Studies show that the average fat content of a vegan diet is around 30% of total calories, and that is not very good. It is better than the traditional American diet, but not nearly as good as it could be. Both groups would be much better off following a whole-food, plant-based approach.

## **Is that the best description for this way of eating? A "whole-food, plant-based approach to diet"?**

I don't know if that is the greatest way to describe it, but it was the term I first began to use. I was on an NIH cancer grant application review panel (study section) in the early 1980s, and we were considering some new research on antioxidants, which was a nutritional concept. When I was preparing for a meeting on the subject, I remember wanting to say to my colleagues that this sounds like vegetarianism. However, I did not want to use the term because many believed that this meant something less than

rigorous science. So I remember thinking, before our next meeting, how to present this in a more scientifically descriptive way rather than through ideology. The only thing I could think of was "whole foods." However, at the time I didn't use the term "whole," I just said "plant-based" diets. So that's where it started. Folks liked it and the term "whole foods" was later added. I still think "whole-foods, plant-based" is awkward; I wish we had a better term.

**Regardless of the way it is described, it sounds like you are in accord with what we in the Natural Hygiene world have always considered the ideal approach to diet; namely, that we should be consuming foods that are in their whole, natural state, and the less they are processed the better.**

I agree. That is reality.

## **And simplicity?**

Yes it is.

***"Both vegans and vegetarians would be better off following a whole-food, plant-based approach."***

**We hear a lot of people say, "My heredity is my heredity, and there are just some things we can't do anything about." They tend to use this as an excuse to not make fundamental changes in their lives. However, I have heard you say that we shouldn't be relying on the idea that our genes are determinant of our lives. Why is that?**

We know the role for our genes and we know that we're not going to change them very much; although some people would like to, I suppose. Our genes are the cellular foundation from which our health derives. It is a very complex system and an area that I began studying as it related to the field of enzymology, back in the late sixties and early seventies. Early on I found it fascinating that, depending on what we ate, especially in regard to protein and a few other nutrients, particular enzyme activities would increase or decrease while influencing all kinds of events in our bodies. Long before the human genome was unraveled by present-day researchers, we knew that protein-based enzymes and their activities start with genes; that is, genes could be "turned on" and "turned off." This led to experiments that confirmed that regardless of gene starting points, it is nutrition that controls whether genes are turned on or off.

**So what do you think when you read and hear about celebrities like Angelina Jolie, who had both of her breasts removed because she claimed she had the BRCA gene? Do you think this is a tragic rush to judgment, and could a lifestyle change avoid such painful actions?**

Yes I do. However, I really empathize with these



women. It's a difficult personal decision. On the one hand, I have become greatly impressed with the ability of nutrition to control genes, even bad genes to a great extent. But we also know that possessing, for example, the BRCA-1 and BRCA-2 genes substantially raises the risk of breast and ovarian cancers for women. However, we know that a lot of women who have those genes don't get these cancers. So, the question becomes, "Why?" And, as years have passed, I've noticed that the estimates of the percentage of women with those genes who actually get cancer have become lower than what had first been considered. I continue to believe that whatever the decision, the best thing women can do is to consume a whole-food, plant-based diet, one that will give them the best opportunity to control the expression of those genes.

I've become a real enthusiast for the role that nutrition plays in controlling gene expression. You see the same sort of phenomenon when people like the Japanese move from their birth country, where the rates of certain diseases are very low, to a country like the United States, where the rates of the same diseases are very high. Their genetic background is the same but they get the disease of the country to which they move. So, it's really about nutrition, not genetics.

**I recall from your days of involvement with the physicians of the NHA your expressed skepticism over the reliance on supplementation as a way to get nutrition? Do you still hold that skepticism?**

Yes, big time! I became immersed in that discussion in the mid-1980s while working on a report for the National Academy of Sciences, called "Diet, Nutrition, and Cancer." There were 13 of us on that panel, and after a three-year review of the literature, we were the first to say that with respect to diet and cancer it would be wise to cut down our fat intake. That 1982 recommendation got a lot of attention. However, what did not get as much attention was what we said in the second recommendation of this report, which was to increase consumption of vegetables, fruits, and grains. We emphasized that when talking about the effects of protein, fats, or other nutrients on health, this did not apply to the use of these nutrients as supplements.

But the newly emerging supplement industry ignored our comments and arrogantly placed full-page ads in *Time*, *Newsweek*, and *US News and World Report*, claiming that our committee had advocated the use of certain nutrients to prevent cancer. It was grossly wrong. This irritated the National Academy because they knew what we said. So, the National Academy then requested the U.S. Federal Trade Commission (FTC) to hold administrative court hearings on that health claim and asked me to represent

them before the court. It became quite apparent during my three-year period in the FTC dock that these folks were more interested in the revenue opportunities for these products than they were in the nation's health.

**Today when you go into drug stores, grocery stores, and even health food markets, there are endless varieties of supplements that are extolled for curing everything from impotency to the common cold. Are you skeptical of these claims?**

I sure am. I testified repeatedly that, based upon my interpretation of the research at that time, this didn't make sense. The problem is that these nutrient supplements are consumed out of context with nature, that is, out of context with our bodies. I have been skeptical of their value from the beginning, and I have followed the research over the years. This research now shows that many of these supplements not only don't do what is often claimed but, for the most part, are actually making matters worse.

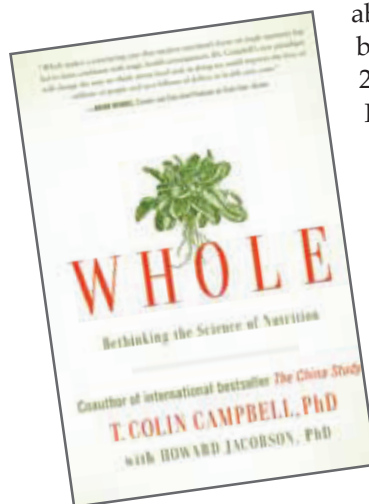
**Do you think it is because of the isolation of these factors?**

Yes, absolutely. When nutrients are consumed in isolation, often at doses that are substantially higher what we otherwise might experience in whole foods, they are going to be vastly out of context. When we consume whole foods, however, there are countless different kinds of nutrients and other substances that collectively create the digestive environment, which substantially affects how nutrients are digested, absorbed, and transported throughout the body.

We must realize that nutrition is not about the effect of a single nutrient, even though we may study them that way. In reality, from the "whole" point of view, activities can be dramatically different. In fact, I became so enthused

about that idea that I wrote the book *Whole* that came out in 2013, and it's doing quite well. I am told that the book is being used in universities as a textbook, even in philosophy departments. In that book I'm trying to make the case that when we talk about nutrition, we need to consider it in the context of the whole. And that is consistent with the story of Natural Hygiene, which I find so interesting.

*"We must realize that nutrition is not about the effect of a single nutrient, even though we may study them that way."*



**Do you feel that Dr. Shelton and other early hygienic pioneers had insights into the basic principles of health long before anyone else, even if they didn't have the benefit of scientific research on their side?**

They absolutely did. In fact, I spent a year in the late eighties at Oxford University, and at that time I was feeling like I was really being attacked by some of my colleagues for some of my outrageous views. I didn't know where all this hostility was coming from, so I got involved in looking at the old literature on diet and cancer from some of the old libraries in London and Oxford. I went all the way back to 1646 and found some amazing stories. I couldn't believe it. From this I wrote a paper that was close to 60 pages in length, but I never published the darn thing. Recently I got it out again and thought, "I've got to publish this."

**Do you also think that our modern medical system focuses too much on individual diseases and their treatment?**

Yes, it does. Our modern medical system is highly reductionist and has been for a long time. We tend to try to solve problems in a very reductionist way that causes a lot of confusion. We don't make the kind of progress that we could.

**The early hygienists would argue that the problem with conventional medicine is that the focus is always on treating symptoms rather than removing causes. Do you agree?**

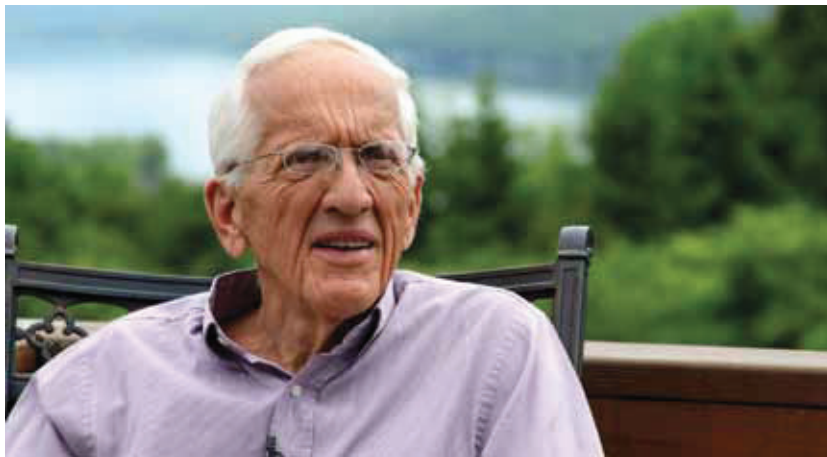
Yes, exactly. When my paper is published, I think the hygienists are going to be pleased with what I've written. It will be coming out sometime soon.

**Does your skepticism about the advocacy and promotion of vitamins extend to the proliferation of immunizations to prevent or cure diseases? Do you have a concern about that as well?**

Yes. Speaking strictly for myself, I can't find convincing evidence that immunization programs are doing what is claimed. When I look at that information it seems to me that it comes up short, substantially short. It's a very complex system.

**Do you put any stock in the claim that the proliferation of immunizations has led to the explosion of autism, ADD, and a host of other conditions?**

I'm not going to go there on that one. I know that these topics have become very, very contentious. And I am going to have to say I don't know. Let's say it could be; but that



*Colin Campbell heads the T. Colin Campbell Center for Nutrition Studies at Cornell University, which offers online courses and certifications. (Photo courtesy of LetLiveFilm.com)*

is a very complex bit of biology.

**I gather that you believe the best immunity people can build is to live well.**

Yes, I prefer to live well. My game plan is simply, "Let's eat the right food and let's get our kids to eat the right food."

**Speaking of getting people to eat and live well, tell me about the T. Colin Campbell Center for Nutrition Studies. What is it and when was it launched?**

Back in the early 1990s when I was still on the campus of Cornell University and had graduate students, a man by the name of Bob Irish came along and wanted to give me some money to support the graduate students. So I formed a 501(C)(3) and graciously accepted money. This became the T. Colin Campbell Center for Nutrition Studies. Later in 2001, when I took my emeritus status, I still had the nonprofit and was teaching a course on the campus called "Vegetarian Nutrition" that was generously supported by the NALITH Foundation. I wasn't very happy with that title but I was encouraged to use it because it could attract students. It was the first of its kind in the country and it was very popular. One of the first students, who had a Ph.D. in physics, suggested that I put the course online, and he offered me \$100,000 to make it happen. One thing led to another and the course has grown really well. We offer three courses on plant-based nutrition, and we are going to add more. We have partnered with the agency of Cornell that does online courses for the faculty. We are now ranked, by applicants, as number one among all of the 200-plus Cornell courses.

**How many students have taken these courses so far?**

It's getting close to 8,000. We also offer 30 "category I" continuing medical education credits for doctors as well

as related credits for other health professionals. We are proud of what we have achieved.

### Have you had a lot of physicians who've taken the course?

We've had a lot of doctors, as well as dentists, osteopaths, and other health professionals take the course.

### What is the cost of the course?

The cost for the three courses conducted over about six weeks is \$1,260, an amount I consider pretty reasonable for a certificate program that awards professional accreditation.

### Former President Clinton credits you, Dr. Esselstyn, and Dr. Dean Ornish with influencing him to adopt a mostly plant-based diet. Have you ever met him?

I have met him a couple of times, and Hillary as well; but I did so prior to his becoming a vegan. I would love to meet him again, but now that the political season is in full swing, I'm not sure that this would be his top priority.

He's a pretty good poster child for the benefits of a plant-based diet. He cited *The China Study* when interviewed by Wolf Blitzer on CNN. He said that *The China Study* was written by a father and son, and he mentioned our names. I've heard from various people in the last four or five months that he continues to advise people on TV to read *The China Study*.

### I know that your life's work has become a true family affair and there is now an army of Campbells fighting for the cause of plant-based nutrition. Tell me first about your son, Nelson.

Nelson obtained degrees in government and economics at Cornell, and he's the entrepreneur in the family. He was always interested in political things and was an assistant campaign manager for a local congressman some years back. He has always been interested in the question, "Why haven't people heard this before?" This question was also the basis, in part, for the book *Whole*. After Dr. Esselstyn and I spoke to the Kentucky legislature on the benefits of the whole-food, plant-based diet, Nelson joined a senior legislator to pass some favorable legislation, but the lobbyists came forth to block it. This led Nelson to make the documentary film *Plant Pure Nation*, which is now showing around the country. He is also developing a network of wellness clubs around the country and the world that he calls "pods." It's all for the purpose of taking people from different persuasions to do one thing in common: follow a whole-food, plant-based diet.

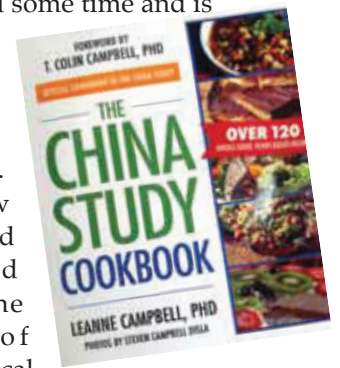
### People always want to know how to eat and isn't that where Nelson's wife, Kim, comes in?

That's right. She has created the *Plant Pure Kitchen Cookbook*.

### Tell me about the work of your daughter, Leanne and son, Tom.

Leanne has a doctorate in education and has been working with the Dominican Republic for most of the last 25 years. She also authored a cookbook called *The China Study Cookbook* that came out in 2013. Then our youngest son, Tom, who was a co-author of *The China Study*, has an interesting background. He was an actor in Chicago but agreed to come back and work with me when I started writing *The China Study*. He had some time and is a heck of a good writer, so it worked out well. In the process, he became enthused about medicine and decided to go to medical school and do his residency. He is now the director of a new

program focused on plant-based nutrition at the University of Rochester Medical Center, directing it with his wife Erin, who is also a physician and on the faculty.



*“The majority of people in our society don't know this information because there are people and groups who don't want the public to know about it.”*

### It seems the apples don't fall far from the Campbell tree.

Well, if that is the case, we have to talk about my wife, Karen, as being the tree! We have been married for 53 wonderful years, and she has really been fantastic for all of us. She started to follow a plant-based diet and really got all of us involved.

### So family dinners must be a very healthy experience with the Campbell family?

Yes, we all follow this dietary lifestyle, including all spouses, children, and grandchildren.

### What new projects do you have in the pipeline?

We are just finishing up a second edition of *The China Study* that will be coming out in the coming year. We are not really changing anything materially, but adding some new material. I am trying to focus more on the question, "Why haven't we heard this before?" This really kind of bothered me, because I spent about 20 years in policy development in this country and abroad, and I've seen firsthand the interface between science on the one side and political interests on the other, and it's not a very pretty





Dr. Campbell lecturing at the McDougall Advanced Study Weekend in Santa Rosa, CA, February 2016. (Photo by Scott Hurlbert)

scene due to intense special interests. It really comes down to the fact that the majority of people in our society don't know this information because there are people and groups who don't want the public to know about it.

**If you don't mind me asking, how old are you?**

I turned 82 on March 14<sup>th</sup> and I still run, exercise, and lead a great life. My wife has done the same and we both enjoy excellent health.

**As I am sure you have read, Natural Hygiene has uniquely argued that health is not just about diet, but rather must include exercise, fresh air, sunshine, and emotional poise and balance. Is that consistent with the T. Colin Campbell view of health and well-being?**

I think you've just said it better than I ever have. That's perfect. You know all those things come together and they are well worth pursuing. But what really bothers me is that so many people don't know this. I've given at least 600 lectures since *The China Study* came out in 2005, and most of them in recent years have been at medical schools or their sponsored events. I find people in the medical profession now warming up to this idea, trying it themselves, and trying to get their patients involved. In fact I have been overwhelmed with the enthusiasm of so many medical doctors these days.

*“To tell an oncologist that there is a real possibility that we can do far more with diet than what they can do with their chemo and radiation is running up against a huge industry.”*

**Of course, more information doesn't always lead to enlightenment, but you seem pretty optimistic that people are getting more educated about health.**

Yes, I am. Of course, I get down at times, but I always tell myself that we have to remain optimistic. It's the only way to be.

**Is there one type of research that really needs to be done that is of particular interest to you?**

Yes, it has to do with using this diet for cancer patients as a means of treatment. My son Tom and I are currently involved in having our Center for Nutrition Studies work with the University of Rochester Medical Center. Tom will be directing it and we've been collecting funding for it. It's a hard road to hoe because the oncology community is pretty stubborn and powerful. To tell an oncologist that there is a real possibility that we can do far more with diet than what they can do with their chemo and radiation is running up against a huge industry. However, I want to do that study and do it very professionally. I want to answer the question, “Why do we spend \$1.2 to \$1.3 billion to create yet one more chemotherapy agent that actually

gives us a return for next to nothing?” I believe I have the answer to that. The fundamental science suggests that we've taken the wrong path in a big way.

**Do you think that such a study will validate the core philosophies of the Natural Hygiene Movement, namely that “health results from healthful living” and “health care is self care”?**

Yes, that's exactly what we want to be able to demonstrate from a rigorous scientific point of view. I think that this will probably go further than any other thing I've been involved in, in terms of bringing these issues to the attention of the American public.

**Well, Dr. Campbell, it's been great catching up with you again. I have always considered you one of the most thoughtful individuals I have ever come across in all of my years in the Natural Hygiene Movement. I can't tell you how much the NHA appreciates the contributions you've made to intelligent thinking about health and disease. We called this publication *Health Science* magazine because we've always put the emphasis on “science” just as you have.**

Well, the folks in your organization have certainly done a great deal to educate me, and they have played a very significant role in my career. For that I am very grateful.

