

INTERVIEW WITH ANDREW SZALAY, "FATHER OF FOODFORM®"

Foodform® Vitamins and Minerals were invented by Andrew Szalay. Andy got his degree in pharmacy at the University of Szeged in Hungary. Albert Szent-Gyorgy, the Nobel Laureate who discovered Vitamin C, was a member of the faculty and was a strong influence on Andy. After coming to the USA in 1956, Andy first worked as a bench chemist; later becoming Vice President of several botanical companies. He isolated a number of active constituents of herbs and other plants. Andy developed a vast knowledge of herbal biochemistry and a deep understanding of how nutrients are complexed with food factors. This is a 1988 interview of Andy by Elliott Goodman, President of IntraCell Nutrition Inc., which was published for the first time in FOODFORM® Family News, March, 2000. © 2000 IntraCell Nutrition Inc. All rights reserved.

EG: How would you put your discovery of Foodform® Vitamins and Minerals into historical perspective?

AZ: I want to point out two directions. One is nutrition, the other is medication. About 40 or 50 years ago, major researchers started to isolate the different vitamins from natural sources. The original idea was to isolate the good materials, the efficient materials, for medical purposes. They made all of their efforts to isolate it from food. They realized that those factors which are present in the food have something to do with the healing effect.

EG: Are you referring to the treatment of scurvy, rickets—that type of thing?

AZ: That is precisely what I am talking about. They tried to extract the materials, in high concentration, so they can use them for medical purposes. They were really looking for medication, not for nutrition, even though humanity evolved through nutrition. They had to go through a lot of pain to isolate the different constituents of food. First of all, we must remember that, if we know exactly the structure of any material, very likely it is not a food. That is because food has such great complexity that it is impossible to put into chemical formulas. But the researchers wanted to have the chemical formulas of the active constituents in the food. So they started to isolate, to separate the fat-soluble substances, the water-soluble substances, the alcohol-soluble substances until they got to nearly pure substances. And then they had to go through the different isolation methods to get out the individual, active constituents of the food. When

they found those 10, 13, 14, or 15 items, they called them vitamins. These were the known chemicals which were curing certain illnesses or sicknesses, and they tried to achieve the healing effect.

EG: Were they able to identify the exact vitamins in the food, or did they just approximate them in some cases?

AZ: They did a tremendous amount research work on it and were able to very-well define the exact structure of the vitamins in the food. And if you look at how the individual vitamins were discovered, you can see how complicated it is to get to the pure substance as it appears in nature. In order to commercialize it and use it for treatment of different illnesses, they wanted to produce it in commercially-available form, which is stable. That is not as it is in food. The way most vitamins appear in food is different from what is synthesized commercially.

EG: So we can concentrate vitamins from food, but they are so expensive and unstable that it's not practical, and so those aren't the vitamins that are produced commercially, the ones called USP vitamins?

AZ: Yes. USP vitamins are supposed to be precursors of those molecules which are active in the biological system.

EG: For the benefit of our readers, what is a precursor?

AZ: Precursor is like this: Suppose you want to produce a leg for a table. You take a piece of wood that is similar to the table leg and you shape it. You get the usable material to the final form.

EG: So is the body able to take these precursor vitamins and shape them and change them into a usable form?

AZ: It depends on how your body reacts to the precursors. If your body lacks certain enzymes, then they cannot be transferred in the usable coenzyme form. But most of the commercially available vitamins are not like the way they are in nature. Your body has to work on the USP vitamins to apply them to its needs.

EG: OK, so then how did you come into the picture?

AZ: I was thinking about how to put vitamins into a more utilizable, nutritionally beneficial form, not a medical form.

AZ: In general, the synthetic vitamins were created by the vitamin manufacturing companies as precursors of the active form, for medical purposes. This was the only reason they created them. Later, they decided that, if it is beneficial for medical purposes, maybe it could also be marketed for nutritional purposes, and it turned out to be a big thing.

EG: In other words, if a person had certain symptoms from a deficiency, say of scurvy, and they were able to treat those symptoms with the precursor vitamins, then they assumed, since the symptoms went away, that those precursors were performing a nutritional role?

AZ: That's it. That's what they assumed. But consider that half a lime a day saved the lives of the sailors 150 years ago, and it contained just a

fraction of the daily recommended allowance of vitamins C. It saved the lives and the health of those sailors. So, there is good reason to think that maybe it's not the synthetic vitamin C that does the trick, but rather it is the vitamin C as it appears in food.

EG: So the medical approach is to treat symptoms, but they are not concerned with feeding the cells?

AZ: That's what it is. Now, when we are talking about Foodform® vitamins, I went back to the original idea that Albert Szent-Gyorgy worked out. In his memoirs he wrote that the impure substance, not the completely-purified vitamin C, was more efficient for recovery of scurvy, or whatever vitamin C could cure. So I took a second look at what we mean when we are talking about nutrition. Medication looks for an immediate solution or cure. Nutrition refers to supplying your body over a longer period of time, so it can be healthy and resistant to sicknesses. This gave me the idea that I wanted to make something nutritionally much more efficient than the synthetic vitamins. This gave the idea to go back to the final purification form before researchers got to the pure substances. To build it together again, the same way as it appears in nature. Because nature has its own way for evolution. I decided to take a new look and to take a new avenue to get to better nutrition.

EG: What happened next?

AZ: I took out all the books, and looked at the individual vitamins, the researchers' work—how they isolated the individual, active, coenzyme form of vitamins. What were the very last things that they tore off before they got them.

EG: So you didn't have to go and analyze it. These researchers already knew.

AZ: Already told me the story. I just had to reveal it. My original and best idea was to start with a fruit or other food and make a concentrate of it and then we would go through what the researchers went through. But then we would have a product that would not be economically feasible. It would cost a thousand times as much as it costs now. So we thought "Let's reverse the process." The vitamin companies had already created the precursors of the vitamins (USP vitamins), let's make coenzymes out of them. How to do it? Take a look how they isolated the coenzyme form, but make it stable. When the vitamin companies started to produce the USP vitamins, they had a problem because they were not stable. They are stable when they are in food. But they were not stable when they manufactured them.

EG: For the benefit of our readers, what do you mean by not being stable?

AZ: They cannot stand up. They decompose. They would lose potency at very fast rate. So our next assignment was to take the already-available

precursor vitamins and find out what were the last constituents that had to be there to get the same biological effect, or as close as they are appearing in foods.

EG: So each vitamin and each mineral was a whole project that you had to work out.

AZ: Sure.

EG: Each one is different. But of course the end result was to get them into a form like they appear in food.

AZ: With all of these materials, we were working on the natural-form idea, with the vitamins and the minerals, (mostly beginning with the minerals) for about three years, and we developed six or seven minerals. But the following seven years, which is up to today, were extremely fruitful because we already built on something. So when we got through with the first minerals, we already knew that certain groups of proteins and carbohydrates and lipids have to be left out because they don't have anything to do to binding up in the active form what we can call the active principles in the food. So we had to group up the active principles and this is how it happened. The idea was on my mind day and night, all the time. And this is how it developed, as continuous building blocks. We have now developed over forty items and there is no end in sight.

EG: Everything you have done went contrary to all of the scientific belief up to that point. My understanding is that, up until your work, people assumed, when we ate food and digested it, that our body breaks it down into isolated constituents. Therefore, they believed that the isolates would be just as good because they're already broken down and would save our body the trouble of having to break them down. But you were the one who introduced the whole concept of natural-form vitamins and minerals and that they would work better.

AZ: Let me add to what you just said. If you went to medical school or to pharmacy school, or anywhere else, and studied nutrition, biology or biochemistry, you always learned the same old principle which said that the food is broken down to individual amino acids if they are proteins, or individual fatty acids if they are fats, and the carbohydrates to individual, let's say, sugars. This is what you learned. If you did not say this, you flunked. You had to swear on it because your professor swore on it. And he learned it the same way. But, when I started to work with this project about twenty years ago, I doubted it because I took a look at all the enzymes which were known to be present in the digestive system. They were not able to break down the proteins to individual amino acids because there were not enough enzymes which are cutting the proteins, and we didn't even know twenty years ago what the protein chain was composed of, how it was hooked up. This came to some light about ten years ago. So, somebody just established this theory, and everybody had to repeat it.

EG: And then as you worked on this project, it became more clear to you?

AZ: More clear to me even today that I don't see that there are enough enzymes in the human body that could be equivalent to hydrolyze a protein, which, in the laboratory, needs to be cooked in very strong acids or alkalis to break down the proteins to individual amino acids.

EG: So it must have taken a lot of courage for you to take a stand.

AZ: I was not brave enough to tell it. I had it in my mind, and I built on it that the body does not break down everything.

EG: And would you say that the university studies comparing Foodform® vitamins and minerals with the USP vitamins and minerals, showing Foodform® vitamins and minerals may be better absorbed and better utilized—would that seem to prove that you were correct?

AZ: I did not do the studies. We got independent researchers to do the studies. We did not talk them into giving us certain results. We asked them to report the results to us even if it is a failure. We did not want to be accused later that we used cosmetics. Whatever the researchers report, we report. Quite frankly, I did not want to speak up during the years while we were working on the biological studies. When I had two or three studies, we saw that we had something. But until two or three dozen studies were finished, we could not be sure about it. Today, I am very strongly convinced that we found the right way and I think it will blossom. And it will bring better health and better resistance and stimulation of the immune system, much better than we had before.

EG: So, these studies are scientific evidence, that your concept is correct. After all, if the protein were broken off when we digest our food, then why would Foodform® vitamins work better? It doesn't make any sense.

AZ: It does not.

EG: So now you're in a situation where you are way ahead of your time, in terms of the scientific community. They're still clinging to the old ideas.

AZ: I am thinking differently than they do. And, if we say that I am right then yes, I am ahead of them. But my thinking is really different than most of them. Now lately, other people are saying the same thing.

EG: So the tide is starting to turn?

AZ: The tide is starting to turn, because, really, if you take the literature on the human digestive system, we don't have basic research on how the material is getting through the intestinal wall, and after digesting, how does it appear on the other side of the intestinal wall, before it gets in the blood stream. We don't have it. Somebody wrote a book and that is how we know whatever we know.

EG: So the scientific community tends to be very conservative and

slow to accepting new developments.

AZ: Sure. But they are supposed to be. And they are doing it. And God bless them. Let them do their own thing. I am doing my own thing, and I am not willing to take their side.

EG: In 1982 I made an agreement with you to use what you developed in our supplements. And, I told you way back then that our desire was to follow your philosophy of nutrition as opposed to a drug use of vitamins. Our concern was that people needed better nutrition and that's why we named our company IntraCell Nutrition because our goal was to nourish the cells of the body. We only use Foodform® vitamins and minerals which we know work better. Our goal has always been to carry forward your work in every way, focusing on nutrition and on how we can make the best possible product.

AZ: I say you are doing a darn good job.

EG: Thank you Andy for all you've done to help improve the health and well-being of so many people with real nutrition.

AZ: Thank you.