The Deception Around Broccoli Supplements

With Dr. Martin Katz and David Roberts

April 27, 2022

David Roberts (00:01):

Hey everybody. It's David Roberts and you're listening to the Mara Labs Podcast. Today I have with me, Dr. Martin Katz, and we will be talking about sulforaphane and specifically how it's different than the precursor product called glucoraphanin. And there's a quite a bit of confusion about these precursor product that are sold as supplements versus our product BrocElite. And this was highlighted recently when Martin went to a conference with physicians who should know better, but they do not. And again, question after question of, "How is your product if than this?" And the standard answer is, well, we have sulforaphane in the capsule. They do not. They have glucoraphanin. And so Martin, can you share some about those conversations at this conference, and just your perspective on this sulforaphane versus glucoraphanin continued confusion?

Martin Katz (01:05):

Yeah. I mean, I think we have to go back to the beginning as to why this is even important. And when we look at the literature, we realize that the whole reason we started this company is because when you're looking at the general population, it's not that easy to get from the precursor molecule to sulforaphane. It depends on a fair amount of things. One, the precursor molecule glucoraphanin has to be mixed with an enzyme called myrosinase to create sulforaphane. Now, that can happen when you eat the plant, such as a broccoli sprout. You break the wall, you break the things within that cell to mix those two molecules together to create sulforaphane, or you can rely on your gut microbiome to take that glucosinolate. So part of the reason this is so frustratingly confusing is that a lot of the marketing out there calls glucoraphanin, again, that is the precursor molecule that's within the broccoli sprout or the broccoli seed-

David Roberts (02:13):

That's not sulforaphane.

Martin Katz (02:14):

That is not sulforaphane, but it is referred to as sulforaphane glucosinolate. So glucoraphanin is a glucosinolate, and you have to cleave that product for it to become sulforaphane for it to be active at the cell level. And again, marketing has been very clever to now call that molecule sulforaphane glucosinolate. So when you look at most of or all of the product out there... Before we started this company, when we were looking out there, we were probably just as confused, and realized in our sicker patients, in those that are really going to struggle to get to sulforaphane... And the literature supports that 10%, possibly, maybe less, to maybe as high as 40% if you got a really healthy gut microbiome, if you're doing really well, all things come together. And the myrosinase, again, that ends on that cleaves that glucose, if that is stable, and you're able to get these two things to work together and create sulforaphane-

David Roberts (03:22):

There's a lot of ifs there.

Martin Katz (03:23):

There's a lot of ifs, and that's the problem. And that's why exactly we started this company. We wanted to marginalize those ifs. And really this is such an important molecule. Sulforaphane is so important. And

we were recently at Environmental Health Sciences, and this incredible gentleman, very energetic, very intelligent functional medicine nutritionist, Tom Malterre, he's done a TED talk on broccoli, The DNA Whisperer, he's written a book called The Elimination Diet, just a dynamic individual, really great guy. And he approached us and said, "Hey, just by the way, you guys realize you are on the forefront of having one of the most, if not the most, important phytonutrient out there." And yeah, we realize that, but oftentimes we're so busy in the science and we're so busy trying to educate and communicate that we... We're not great salesmen evidently, because people are still confused about why this is so confusing as to understand that just because you're taking glucoraphanin sulforaphane glucosinolate, it takes a lot for you to get too sulforaphane and then get it into the cell.

Martin Katz (04:36):

Again, it's like if you're trying to make coffee, you've got to add other things. If you just use the pod, it's not going to get you coffee. Or if you're using, sorry, chocolate, same thing. There's a lot of things that need to be added to get to chocolate that you enjoy or a cookie. There's so many examples out there.

David Roberts (04:55):

My favorite is looking at decaf coffee versus caffeinated coffee. And assuming all coffee in the world's decaf, which it does have caffeine, this one to 2% caffeine. And then all of a sudden there is a company that has fully caffeinated coffee and the difference there. And that's really the difference between a capsule that has glucoraphanin, which from my experience in looking at numbers, it's less than 5% gets converted into sulforaphane, sometimes nothing gets converted, versus a capsule like ours that has actual sulforaphane in the capsule. When you swallow it, you get the benefits. But let's go back to what you were talking about, the confusion. So it's not just lay people, it's everybody. It's the doctors. That was primarily a doctor's conference, wasn't it?

Martin Katz (05:48):

Yeah. It was practitioners, nurse practitioners, PAs, naturopaths. I mean, these are people that... knowledgeable about sulforaphane sort of, if you will, a low-hanging fruit practitioner conference, that they are very interested in this molecule. They are talking to their patients about this molecule. So they realize the importance of this molecule. Again, we've talked about this numerous times. Why would you even want to take this molecule? Well, because it's the master regulator of detox and oxidative stress. Unfortunately, oxidative stress uncontrolled, it's very important to be able for yourself to communicate and for you to have some of that oxidative stress around. But when it's out of balance, unfortunately, it leads to inflammation which unfortunately can lead to all the diseases you name. And we are realizing just about every disease in the human body is related to inflammation and likely this out of balance oxidative stress. And so this is an incredibly important molecule. And you look around and as far as toxins go there's 80,000 products out there. We don't fully understand what it's doing to the human body and these-

David Roberts (06:57):

Chemicals.

Martin Katz (06:58):

Chemicals, sorry. And these are being added to every year, unfortunately. And you look around and even forest fires now, as we're heading into the summer and this particulate matter and what that does and what's in there, and again, how sulforaphane has an amazing effect on all three phases of detox. So

it down-regulates phase one, up-regulates phase two, because you don't want your phase one to get ahead of your phase two, otherwise you're just circulating these toxins around the body. And then phase three, so you're allowing for elimination. And sulforaphane does this incredibly well. Again, one of the phytonutrients out there that sort of sounds like snake oil when you start looking at it. But again, people, what I encourage you to do is go to PubMed and put in sulforaphane and anything you're concerned about as far as health condition, and likely sulforaphane has some time type of activity against this because of how it works with oxidative stress and detox.

David Roberts (08:04):

Yeah. Before Google had sort of the keywords cracked down about a year and a half, two years ago, SelfHacked, which is a really nice website that curates a lot of different phytonutrients, they had a sulforaphane webpage that was titled 39 Different Pro-Health Benefits of Sulforaphane. Now it's titled 7-Plus Health Benefit. What they do though, is they take the literature and then they look at individual health benefits. So there are at least 39. I think we may have found one more that they missed. So 40 health benefits that are distinct health benefits of sulforaphane.

David Roberts (08:43):

And so one of the experiments that John Gildea did in our lab was looking at there are products that have myrosinase enzyme in the capsule with glucoraphanin. Again, that's because people haven't figured out, out how to stabilize the sulforaphane, and so they give you the byproducts, you need to create the sulforaphane, theoretically, in the gut.

David Roberts (09:09):

But what he found were two things. One, he basically did a diet digestion of the capsule and the contents. So looking at, okay, you have myrosinase in the capsule, you have glucoraphanin in the capsule, digested it with digestive enzymes, trypsin, pepsin, et cetera. And even though they were the distinct parts, it did not convert into sulforaphane. And so that was pretty interesting. But then just looking at the why, the myrosinase is an enzyme, it's a protein. And so it gets degradated in the stomach by in the enzymes of digestion. And so this idea it's... From my perspective, it's more of just a marketing ply. Hey, let's put this enzyme in with glucoraphanin, and even though it may not do anything, we can sell more.

Martin Katz (10:08):

Yeah. And I'm not going to take it away from companies. I'm sure there's companies working hard to try and stabilize myrosinase and do what they can to put these two molecule together, because they realize the importance of the sulforaphane, which again is why we started this company. We realized the importance. John put in the hard work, the incredible hard work to stabilize it. And this is a molecule now that once stable is hydrophilic. So it moves around the body really, really well.

Martin Katz (10:33):

So we're trying to cultivate at wellness with generations to thrive. And our goal is not only to have our families healthy, but as a physician, as a practitioner, I have an extended family in my practice and just tons of disease, tons of illness. And if I can extend some of that health benefit to my patients and communities, et cetera, then I feel like that's a job well done.

Martin Katz (11:03):

It's frustrating as a physician, certainly trained allopathically, we leave medical school with a few tools, and certainly one of those [inaudible 00:11:11] even how to teach people how to eat, which gosh, that's a huge gap in education. But we don't have much tools. So yeah, it's surgery. It's medication. It's maybe some therapy. But if you can have some tools in your box to help people move towards wellness and help them understand that as a life raft... I mean, I love prevention. I love teaching people about eating healthy and exercising, sleeping, as you know, I talk about it all the time. But sometimes people need a little bit of a health raft, something to float upon to get them there. And this can push them a little more quickly in the right direction, as can curcumin. There's some products out there that can certainly help.

David Roberts (11:54):

Indeed. So if you're wanting sulforaphane in the capsule, BrocElite is one of two products. It's the only naturally-derived stabilized sulforaphane product on the market. The other products that say sulforaphane, look at the fine print. It's either broccoli seed they just grind up or it's glucoraphanin that's extracted. But that's not sulforaphane. And it's labeled sulforaphane glucosinolate. Again, the glucosinolates are a family of molecules that have a glucose on them that myrosinase cleaves that glucose off. And then it turns into what's called an isothiocyanate. Those names aren't important. What is important is the glucosinolate is not... It's the precursor. It is the precursor. It's not sulforaphane. Sulforaphane glucosinolate is translated into precursor of sulforaphane.

Martin Katz (12:47):

And to be biologically active, it has to be cleaved.

David Roberts (12:51):

It does, yeah, to get-

Martin Katz (12:53):

It's not going to work as glucoraphanin or sulforaphane glucosinolate.

David Roberts (12:56):

Yeah. And so there is a price difference, because we're doing a lot of work. It's backbreaking. I've made it myself. From my perspective, it's invaluable. It is an expensive product, but it is expensive to make. And so if you're wanting sulforaphane in the capsule that's naturally derived, try our product. We do have an unconditional money back guarantee because we stand by what we're doing.

Martin Katz (13:19):

However, again, I strongly encourage people to go to PubMed and just do their own research and find out what an amazing molecule this is. And I think it's just a matter of time before people realize that this should be in their regimen.

David Roberts (13:35):

Yeah. And we can't actually put direct links to the PubMed articles because it's against FDA regulations. We can say, "Hey, type in sulforaphane and X, whatever issue that you're facing, and see if there are papers that come up." There's like a two-click rule, and so if you click on PubMed and then you click on the link, it's actually... That's legal, but we can't actually direct you.

Martin Katz (14:00):

Yeah. I mean, just remember that food should be thy medicine. And I think it's essential that you eat things as food because there's a lot of intelligence to that. But the due diligence has been done on sulforaphane. This is the molecule that we're after, and again, so we can feel fairly good about presenting just that molecule, even though we feel that our BrocElite does so well, is that we do extract it from the seed, and so other things are coming. So there's an intelligence to that.

David Roberts (14:28):

Yeah. That's a good point there. I think it's really appropriate to highlight is most of the studies, 80, 90% of the studies, come from broccoli sprout beverages that were created through Johns Hopkins. The Johns Hopkins Chemoprotective Institute has a huge broccoli sprout growing operation, and we're sourcing these sprouts and the sprout beverage to researchers to do their research.

David Roberts (14:57):

And so basically, that broccoli sprout beverage is the whole food. Now, what we do is we extract from the seed, but more than just sulforaphane gets in. There's PEITC, phenethyl isothiocyanate that we throw in there from watercress. There's BITC, AITC, iberin. I think there are over 10 different cousin molecules to sulforaphane in the seed. And all those molecules work together to produce an effect that's greater than just sulforaphane alone. And so that's a differentiator because the powder in BrocElite is analogous to those broccoli spread beverages that you read about in the science literature.

Martin Katz (15:40):

One other thing that came out of this Environmental Health Sciences Conference, yes, we would prefer people eating the sulforaphane or taking our sulforaphane that's stabilized, but we do understand it's an expensive product. A lot of these practitioners were telling people to go get broccoli seed and sprout it and eat it. What we've realized, and again, what John Hopkins was doing at the Chemoprotective, they were studying and doing HPLC or mass spec on all their product. And we are again taking the time here to do HPLC on our product, making sure that we are delivering to you what we say is in our product, because we wouldn't want you to waste your money for sure.

Martin Katz (16:20):

So what we realized is some of the seed that we were getting had very little to no... sometimes even no glucoraphanin precursor molecule within it. And so you can sprout those all day long or we could spend the backbreaking hours to make our sulforaphane, but we were not getting any product. So make sure you're getting something from a company that has a specified amount of glucoraphanin. We check all our product, and we do actually offer the seed to buy that you can sprout.

David Roberts (16:48):

Yeah. And so that's a great point, Martin. We do sell our seed for that very reason. So well, that's it. That's all we have for today. And we'll be back next week with another episode of the Mara Labs Podcast. Dr. Katz, thank you for joining me today.

Martin Katz (17:02):

Thank you, David. And to all of you, please take care of your human.

David Roberts (17:06):