Introduction to A.J. Lanigan and Beta Glucans

Welcome, everybody, to another amazing episode of the Breast Cancer Breakthroughs Summit. Today we have a famous, seasoned immunologist, A. J. Lanigan.

He has over two decades of experience and is a graduate of the University of South Carolina of Pharmacy since the 1990s. He's been at the forefront of immunological advancements, particularly in the development and manufacturing of highly purified beta glucan.

So we're going to learn about beta glucans today. So his expertize is the immune system, which we're all concerned about when it comes to breast cancer.

And so we're going to dove in. And welcome, A. J. Thank you so much for taking the time to be with us. Great. Thank you. A lot of awake alertness is in.

I just turned 71 years old. Wow. Over the seventh Pearl Harbor Day, so I'm still fresh as a daisy. There you go. That's excellent. Happy to hear that.

All right, so before we dove into beta glucans and what they are and what they do, and just out of curiosity Why beta glucans, because we know there is such a vast array of things out there that can support our immune system.

But why? Why did you pick beta glucan? Well, let me let me give you a little backdrop of what what led up to it, because it wasn't like I woke up, you know, 70 years ago and said, boy, I think I'll pursue complex carbohydrates.

My grandfather, my my mother's father, you know, my my hero when I was, I don't know, five years old, ended up with prostate cancer. They didn't have a whole lot for you back then.

A radiation They pretty much burned him up. I walked in on a Saturday morning. He was kneeling to pray as he typically was, and they passed away. And my mom, you know, took me by the hand and we knocked on every screen door, you know, within miles, raising money to to help, to fight, to fight cancer.

So it's kind of been in my blood for decades. And so fast forward. Always interested in chemistry, biology, how things worked.

Personal Motivation and Discovery of Beta Glucan

I was given a magnifying glass and figured out I could use it, amplified the sun's rays and good could explode. As they came out of there their little they ended up in the front yard on fire.

Of course, back then nobody said anything if you barely beat you. So that was that was that was a good one. Ended up later on a microscope. So it just is one thing after another.

My family always prompted me and to that not knowing how I would end up in high school again, excelled in biology, chemistry, those kinds of things. And actually when I started to play golf, something for college, I selected the chemical engineering and one of my football coaches said, A. J. that's one of the toughest things on the shape.

You might want to rethink that. I said, Well, Coach, I said, What should I do? He says, Well, he says, What about Pretty Devil? He he'd been a college football player at Clemson.

And then, you know, my coach, he knew what he was talking about. Right. And so I said, when fiddling around in people's mouths that that's not really for me.

He said, What about pre-med? It is sort of still back when you could actually call and get a doctor to telephone. People want to call you at all times of the day and night.

And he says, Well, what about pharmacy? So I can't find anything wrong with it. I know a bunch of great guys and gals that a pharmacist will give that a try.

So that was my impetus to go down that trail of I seem to have cousins, aunts, uncles every time they ended up in the hospital. Bad things happened. Maybe they were in a car wreck, got a broken leg.

They come out with a hospital borne infection and ended up losing the label, just, you know, just to run a bad luck. And I'm thinking all this modern technology now, again, I'm thinking modern technology, 1970, not so modern today, but back then, you know, there's got to be answers to these things.

And so fast forward again, one of my colleagues at Denver calls me up and he says, A. J. he said, I've just come back from Japan. His father ended up with prostate cancer and he says, I've found this material that's actually a drug in Japan.

How glucans. Now they extract their glucan from mushroom. And you know, the it comes in little little small packets. You take 3 to 6 packets a day, ten bucks per package.

You can't get it without a prescription. You open it up, you stir it up in hot water and drink it. It smells a little bit like dirty feet. And they're having fantastic results with it.

And so but they again, you had to go to some place called the library and check out what they call books and read those books because Al Gore had not invented the Internet yet.

And so pub had these other, you know, nifty things that we use so easily and take for granted today. So hundreds of articles on this material. And I'm thinking, well, how come this just over in Japan and not here in America?

That certainly me on a more generic quest was one of my great friends. And, you know, as things worked out and as I discovered, glucans can be found in just about any kind of fungal form, not just mushroom, but but schmutz, molds, buildings.

We don't want to talk about those too much that people don't like them. Baker's yeast, which is what we ended up cheesy. Why? Because it contains the highest amount of glucans per volume, certain algae certain as a college pond scum, green things.

Certain bacteria will have this molecule, but every source, the molecular structures a little bit different. Now, what kind of car to drive. And all the Mercedes.

Okay, great, great choice. Great choice. I drive a tundra pickup truck. Okay. I like to drive you. Mercedes sometimes matter, but. But think about now the key that cries your automobile versus the key that cranks my truck.

They're both vehicles. They're both gasoline powered. But is yours diesel? It's gasoline. Gasoline powered. Okay, but different keys. Crank them up. Well, the secret to this material, but as we refer to it generally as a glucan, is that material, when processed properly, will be a key that cranks up the immune cells.

We have what we call a receptor.

How the Immune System Works

Think of that receptor like the keys, which you have to put your key in. So immunology is not an old science. Biology chemistry has been around thousands of years.

Immunology not that many decades. So as we develop more technology, we're able to observe more and more

things and determining, okay, there's this receptor on the surface of immune cells they actually early on named glucan receptors.

Interesting technically we call it the CR3 or complement receptor number three, there are others, but it's that molecule that I like to say turns a Woody Allen I mean cell into Schwarzenegger cells.

And if you've seen the movies take a lot of Schwarzenegger's to get the job done, so that's good. I like the five minute escapade that got me into the game, so to speak.

Interesting. Interesting. I never knew that story. So we all talk about boosting the immune system and making sure that our immune system is strong. But I think most of us don't really understand the complexities and what the immune system is all about.

So why don't you explain to us what the immune system is and how it works or does not. Okay. It when it when speaking to large groups, I used to get people to stand up and and get them to hold out their two arms.

Okay. One of the two arms of the immune system re referred to as the innate immune system. That's that's the one that was in play the first day that you drew your first breath as a newborn, protecting you until the other arm, which we call the acquired or learned immune system, has an opportunity to manufacture antibodies and certain other chemicals to have a more precise defense.

Now, immunology goes back a long way, if you think about that, by the name of Through. He was a historian that wrote about the polyp in Asia in war. And one of the things he took note of is this play that came in that was so bad that they actually had to put the war on pause for a while because so many people were falling prey.

Not really sure what that played was some ideas, probably what COVID 19, but it was bad enough that it shut down a lot of stuff. What this guy took note of is it people who came down with the plague and it didn't kill them.

They recovered and they were able to go back and take care of those people newly infected and they never got sick again. This was the earliest mention of what we call innate natural immunity without the use of anything external.

Now, years later, there there was gosh, the Chinese, the Muslims, they used to take the scabs off of people with smallpox, grind them up, and then take a long pipe and blow the dust up into the nose of individuals.

This was called very elation. Now, if if it didn't kill you again, made you sick a little bit, but if it did, then the smallpox would not kill you. You developed immunity from this early exposure.

Lady Montagu was there with her husband, and she went back to England. And as smallpox came to England, of course, you know, the royal family worried about it.

The royal physician says, well, this this this lady's written all these papers about this very election thing. Maybe we ought to try. And the royal family says, is it safe?

He said, I don't know. He said, we'll go down to the prison and get a bunch of prisoners and we'll try it out on them first. Well, it worked. And so, you know, of course, Jenner came along and he gets a lot of credit.

Actually, there were a lot of people who were involved in the concept that cowpox might give us some transfer of immunity or ready our immune system. So this this concept is what most people think about when they think about the immune system, is that I've got whatever cards that Mama and Daddy dealt me.

So that's the main system I've got to live with. We've got these external ways that we can maybe prime the immune system. Beta glucan though is different.

Beta Glucan has, number one an incredibly safe way. I mean, baker's yeast has been in our environment as long

as we've been in our environment. It's been a food source.

So the the Windows safety, you can't harm to describe it. So using it to prime the immune system again, we understand it now. We understand the molecule.

We understand how to get the molecule. We understand dosage. Tremendous research. Now, when I started 27, 28 years ago, it was about 700 articles on Pub Med.

Today there are over 200,000 wow alcohol journal articles written on this material. So the interest continues to grow their groups that are trying to get it approved by the effort.

Excuse me, I was going to say FDA, but I can't say that about the FDA as as a drug and as a as a water soluble injectable. But in the meantime, we're able to produce it, take it orally.

And that has a tremendous safety record and lots of peer reviewed literature on the benefits of the product. So that that kind of brings you up to 2023.

And The Quest continues. I mean, we keep learning. We keep developing new methods. We learned if we compare to the other things like vitamin C or Astragalus or even other forms of of mushrooms, algae, aspirin, all these things, we have the material that this is supreme sourced.

But if we, Mariette, with certain other things like that, with the sea, we get a little bit better. But if we, Mariette, with a high quality resveratrol, we get a little bit better bone.

But if we Mariette, with selenium, a lot of people take selenium to get that immune boost. We we marry with the baby glucan we do a little bit better.

So doing this research, testing it over and over and over again alongside and then in combination more medical journals get published on this material and people then can make better choices because there's so many choices in the world.

And frankly, the typical consumer doesn't have a prayer unless they get good, reliable information like like you bring you good, strong, clear information.

And and if people will embrace it, well, it makes their journey a lot easier. Totally. So what happens to our immune system when there's cancer in the body?

Beta Glucanu2019s Effects on Immune Cells

Why doesn't everybody in the immune system just affect the cancer so we don't have to do all these other things? Well, when I was a young fella, then a while, the chances of you coming down with cancer was something like one out of six.

Today, if you're. It's like one out of two. Now, if you're a woman, it's one out of three. And these are not my numbers. You know, everybody that's the number crunchers and the American Cancer Society, they're the ones that come up with a stat.

The stats are tend to maybe oversimplify and that if you get diagnosed with cancer, it means your immune system has failed you. The immune system, again, in the simplest terms, job is to surveil, identify, attack and eliminate those things that don't belong there, including cancer cells.

Now, you can you can pull breast cancer out as one type of cancer, but even with that within that bracket, it's like the old Howard Johnson's. You got 32 different flavors of ice cream.

Now let's go back to the immune cells. You've got neutrophils as macrophages or macrophages, depending on

which side Atlantic you're educated, you've got natural killer cells, you've got them draining cells.

Let's just stop right there. That's enough to remember for right now. Yeah. Every one of those has this unique receptor that our beta glucan molecule activates.

Okay. They have a very simple, simple process. You're either self or your non self. You set a limit now e.g cancer starts not like a virus or bacteria from the outside it starts inside.

Okay, that's one more reason why your immune system has to be significantly elevated when when you smoke, when you don't eat properly, stress. All these things put, you know, suppression and depression of the immune system and even a healthy immune system.

And this is a unique thing about product. You can take the healthiest person out there, use this ingredient. It actually in relatively low dose, around two milligrams per kilo of body weight.

Well, wait a minute. We're one of the few countries in the world that don't use the metric system. Okay. Right. One 100 milligram capsule per £110 of body weight.

And we can raise that average healthy immune system by over 50%, while by using more, you can get it go higher. Now, again, how do we know this? Because we tested all of these things that we're discussing today.

We know because they've tested and retested where in major universities teaching hospitals, not just here in the US but scattered around the world. When we get up in the morning, there will be hundreds of institutions around the world with this ingredient trying to learn more, make it better, and find out more uses for it.

Oh, it's particularly difficult, I must say, here in the US to get the government agencies to lighten up a little bit. It'd be one thing if I was, you know, digging uranium out of the ground and, you know, trying to get you to use it.

But I'm trying to use to give. There's been in Nature Nation, we've been around for thousands of years. So it is kind of tough when you're trying to introduce things like that.

Yeah, I get it. So what part of the immune system or which immune cells are most affected by the beta glucans? Okay, you've got literally trillions and I always invite people actually write that number down.

That's a lot of commas of zeros. Okay. So 50 to 70% of your white blood cells are cells called neutrophils. Okay? They're most noticeable. Like if you get a splinter in your finger to you, wake up the next morning, all that white pus, those are actually dead white blood cells, more specifically neutrophils.

They are one of your first first responders. Okay. Their bigger brother or cousin. The macrophage or macrophage are natural killer cells. The numbers aren't huge, but what they do is really something.

What they do. And this is important in regards to cancer. They look at our cells one at a time. Smiley face. Smiley face. Smiley face. Mm. Not a smiley face bottoming.

Barbara So this answers the question about, okay, the cancer starts inside, but it cannot trick a fully functional immune system now once you start fooling with the cancer, so to speak.

And again, I don't I don't try to pull them out standard of care. The thing I say is let's lay all the cards face up on the table. And as long as you understand the good, the bad and the ugly of what's before you so that you can make an informed decision.

Not somebody talking up here so you can't figure it out. You make an informed decision, but it's twisting your arm. Then you make your choice. Well, the other one's got cancer.

You're the one. You got skin in the game, so to speak. I'm here to try to give you the best outcome possible. And so

those natural killer cells are incredibly important.

Now, also, there's one other I want to mention called dendritic cells. They're incredible cells that are carrying messages back and forth to the other arm of the immune system.

You're major players. There are your T cells and your B cells. Now what? Not long ago, we didn't even know where antibodies came from. In fact, one of my colleagues up at Clemson University was on the team that discovered the B cells in A why they called it the B cell.

You know, they found it in the Bursa as they're the tail cells. Oh. Interesting.

Comparing Beta Glucan with Vitamins and Herbs

So the B cells are responsible for receiving information and then they will start to work to give a specific immune response in the way of a specific antibody for that one unique target, herpes one one antibody, cytomegalovirus, another HSV six, otherwise known as Rosey Yellow, yet another.

So those antibodies zo take 2 to 3 weeks to develop. What keeps you alive in the meantime? These are other cells I mentioned all the inmates that now all of those aforementioned have the glucagon receptor, T and B cells don't have.

But what they do have is direct communication through what we call cytokines, lymphocytes, chemokines are referred to as illegal. E my emails and fax messages.

Yeah, a lot of you younger folks may not know what fax is googling. Okay, so it's it's a way that all of our cells know all the time what's going on. And there's ways for those cells communicate with their metabolic system.

Also, these cells have the ability to communicate with our brain and central nervous system. It is a miraculous set of equipment that we are born with.

And in spite of all the challenges, all the things you know in all of us, around us trying to give us all the time, it's our immune system that stands between us and all that stuff.

The immune system fails you. Bad things may happen right? Then later, right? So breast cancer is many flavors. There is there may be these cells that like eating ice cream.

Okay. What we're going to do is we're going to activate them so that they can eat more ice cream faster. And even if a person shall choose, is standard of care, there are other things that will happen.

You'll end up with chemo and radiation, just knocking the legs out from under an otherwise healthy person's immune system. It has been shown over and over again that using this material will help to fortify, support and make sure that our bone marrow, which is like the boot camp for your immune system, is going to continue to pour out plenty of cells to replace those that are being either destroyed or otherwise nullified, dumbed down by things like chemo and radiation.

In fact, one of the more remarkable things that people talk about is their oncologist saying, well, you know, I don't understand most of my patients at this stage of treatment, the white blood cell count so crashed.

We may even have to stop the treatment because once your white blood cell count goes down so low, somebody might sneeze in the next room and you end up with pneumonia.

Right. So it's very, very important that regardless of you go going totally complimentary or totally standard of care, are you trying to marry the two you cannot forget?

You cannot ignore the immune system no more than you can ignore. You've got beautiful teeth. And when you

smile, you light up a dark room. With Thank you.

For now. Here's the thing. I know you eat well. I've seen you play basketball, so you're very fit. Okay? You do all these good things. You deal with stress, you get plenty of rest.

What would happen, though, if you didn't brush and floss you teeth? You see it, right? You've got to do something extra to support healthy teeth and gums.

You can't forget about your immune system. You take all your vitamin D, the good food you walk you all this stuff you do, you say your prayers. You can't ignore the immune system.

You've got to support it, or it may fail you. And just by getting older, the immune system will will dwindle down. It's called immune sun. Since the beta glucan can help mitigate that, it can keep you up where you need to be.

And so people say, well, what does it affect the brain age? I said, Well, I'm not saying you'll get smarter using my product, but if you hold it in one of my bottles, you certainly look smarter.

So that's funny. All right. So there's a lot of talk about boosting the immune system with vitamin C and different herbs. So how do how do beta glucan compare to those types of things?

Are they more powerful? Are they more direct to acting than just vitamin C or something else? Okay. Every everything, whether it's a vitamin A, mineral, essential fatty acid, amino acid, everything goes into your body, has some mechanism of action.

It changes something. If it doesn't have an effect on a change, you need to use it. It. Okay, so certainly vitamin C, vitamin D, ASTRAGALUS has a long list of things that are well known and well established in the medical literature to have benefits to the immune system.

Now, we didn't have the ability to actually measure those very well 50, 75 years ago. Today, though, we are able to measure just as precisely as we can measure the temperature.

The measure, barometric pressure, all of these things we can measure down to to the Nano or pico amount. So can we now with immune response. So what do we do?

We get a group of subjects that are healthy and this is the important thing. They're healthy. We give them vitamin C, they're already eating a good diet.

So if you're eating a good diet, you should already have the vitamin C. Does it have vitamin? Does the immune system act differently? This can be measured.

What about vitamin D? Again, it can be measured. What about certain herbs? What about it? You can measure all these things. You can then use our material and this is actually published in Sur.

I think we've had six different studies doing comparatives to these other things, vitamins, minerals, even other glucans. And we find that, yeah, there's a difference.

But then with our material, the immune response goes like this. But we come back and say, Now with vitamin C added, we get an extra little bump. So by using a combination of the two, you get the benefits of the both of both.

Now are good friends down in in Georgia with Better Way Health. They actually asked me to put together a formulation we've got a standalone beta glucan, a relatively low dose.

Most people who are healthy use that low dose. It's a 100 milligram. You take one capsule per £110 of body weight. We also have a 500 milligram. Now those are people that want the maximum, an immune response.

And again, we've been able to measure how much you need to get the maximum when you take one of those for every £55 of body weight. But then after doing a lot of work, again, not him, not in my not in my back room over here, but in major universities, we've put together certain vitamins, herbals and whatnot.

And we're able to have a product that not only gives you the same benefit of the 100, but you also get the benefits of these other compounds all in one capsule.

So you don't need four, five, six bottles. You get the one bottle you're getting the benefit of most of it.

Using Beta Glucan During a Breast Cancer Journey

I'm if he had noticed, I'm kind of into the immune system, people that are into resveratrol, some reason they want to live forever. You know, they'll talk about sirt1 and, you know, telomerase and all that sort of stuff.

I don't tell you about those, but that's not my favorite thing. Right? But but that's that's what we've learned over the last two and a half, three decades is not only that, it's good, but we can measure just how good and and again, they answers us to those kind of questions can be found on a pub med raging them don't know this but I'll tell you anybody that wants to learn more about this there's there have been several books, one I've written about one of the premier researchers, Dr. Vaclav Vetvicka and he just retired last year, but he's written several of these books that give this information.

I know a guy that has some in the warehouse, and if you decide you want some of your folks that follow you. I'll let you have the books. Oh, wow. You let me know you give them to who you want to give them to.

But again, now we have a lot of young people that are not used to books. Right. They'll have I prefer books. But it also gives a good overview of probably another does and doesn't have other herbals, vitamins and so forth, giving you the good, the bad, the ugly.

And then chapter 15 starts to get into the tall weeds. That's not going to be for a day to get that kind of detail. But for the average Joe and Sally citizen, it gives them a great overview and happy to help you.

I think that'd be great. Yeah. We would love it. Thank you. Thank you. So one last question, though. Somebody is on a healing journey with breast cancer, and I know we're not we're not talking specifics but generalities.

Sure. So would they do the 500 milligram per 55 pounds of body weight? Just that just a third, just once a day or twice a day or. That that would be that would be, of course, in pharmacy school, they told us that A. J. you know diagnosis, prognosis or prescription.

And we will let the doctor say pills. Well, I kept my part of the deal. I'm not so sure about the doctor, but I see all those ads on TV for, you know, the little blue pill, the little grain bill or hemodialysis pill.

Anyway, what what I tell people is you've got cancer. I don't have cancer. Oh, you need to decide whether you want to throw the kitchen sink or whether you want to just prepare it with it.

And I don't mean to sound jaded about it, but after, you know, as long as I've been doing this, what do you hold it back for? Go ahead and put a can of.

Well, only excuse me, but that's what you want to do when you've been diagnosed with cancer. And so yeah, I would tell them to go ahead and get the 500 milligram.

There's nothing on the face of the earth that they can use to get a higher immune response. They get on, they get on the scales, see how much they weigh one capsule daily per 55 pounds of the body weight.

Wow. They can take more. But we know that that's going to maxed out. Yeah which which by the way is over double what their typical immune response would be and let me tell you, you don't want your immune cells eating

as much ice cream as they possibly can.

You know what I'm saying? Absolutely. Absolutely. Well, A. J. we thank you so much for your time and we really appreciate Better Way Health being a sponsor for the Breast Cancer Breakthroughs Summit and certainly understanding the immune system and learning about beta Glucans I know during my second healing journey I did use beta glucans and I felt they were very instrumental in boosting my immune system.

So thank you for your support and thank you for your knowledge and all the work that you do to make this world a better place. See you on my next birthday.

All right. Nice to see you. Well All right. This is Dr. V signing off for now.