Endogenous Retroviruses
Guest: Christine Schaffner

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Jay: Hello, this is Dr. Jay Davidson, from drjaydavidson.com. Thank you for joining me on the Viral and Retroviral Summit. My guest is Dr. Christine Schaffner. And we are exploring endogenous retroviruses.

But before we do, a little bit about Dr. Schaffner. Dr. Christine Schaffer is a board-certified naturopathic physician who graduated from Bastyr University in Seattle, Washington. Prior to Bastyr she completed her undergraduate studies in pre-medicine and psychology at the University of Virginia in Charlottesville, Virginia.

Dr. Schaffner is passionate about practicing medicine and creating healing spaces. She is the clinic director of Sophia Health Institute, the clinic that she co-created with her mentor, Dr. Dietrich Klinghardt, in Woodinville, Washington. She actively sees patients at Sophia Health Institute and through her practice, Marine Naturopathic Medicine in California, as well as Bella Fiore Organic Med Spa and Clinic in Seattle, Washington. Dr. Christine Schaffner, welcome to the Viral and Retroviral Summit.

Christine: It's so great to see you again, Dr. Jay.

Jay: I know I always butcher that. You want to say that? Bella Fiore?

Christine: I have a local practice in Seattle called Bella Fiore Organic Med Spa

and Clinic. So, we see a lot of local patients there. And yea, you'll have to check it out sometime.

Jay: Cool; thank you. So, we're going to talk about endogenous retroviruses. So, do you mind laying the groundwork of what is an endogenous retrovirus?

Christine: Absolutely. And I'm so glad that you're talking about not only viruses, but bringing retroviruses into our conversation in the summit. Dr. Klinghardt was the inspiration of our mentor, Dr. Judy Mikovits, who you've interviewed on the summit. And I'm sure many of your listeners are going to have to look into that recording maybe four or five times, including myself. She's such a wealth of knowledge.

And she really brought this topic to light. And she came to Sophia and educated us. And then we started putting her protocols into practice. And we saw a lot of our stuck patients getting better. And when you treat patients like we do, Jay, we pay attention very quickly when you've been stuck with a patient and all of a sudden things start to move. And so, that's really what brought this topic to light and caused us to go deeper and to try to understand this more.

And so, when we talk about retroviruses, obviously the first thing that comes to mind, most people think of HIV and the AIDS virus. And so, while that is a retrovirus, we also need to distinguish between endogenous retroviruses and what are called exogenous retroviruses. So, endogenous means that we actually are born with these retroviruses in our cells and in our DNA. And I'll go over that in a moment. And then exogenous are more about what we get in our environment. So, that's going to be something like HIV.

And exogenous retroviruses are also co-transmitted in tick infections and vector-borne illnesses. And vaccines can be a source of retroviral exposure as well. So, that is one topic, exogenous. But really what we're learning that really is important to think about in the clinical picture is how we are born with these endogenous retroviruses and what triggers them to be expressed.

And so, just to give you a little bit about high level what this all means. You'll see the nomenclatures HERV, or human endogenous retrovirus. And when you're learning about this topic, there are different categories, like we do in science. So, there's going to be nomenclature like HERVK, HERVW. So, this is just different classes of retroviruses. So, there's the beta group, the gamma group, and so forth. And why I just bring this to light is that there are many retroviruses. There's not just one retrovirus that we're looking at.

And so, what happens is we know about five to eight percent of our own DNA or genetic material is actually retroviral DNA. And that's actually a very big

number. I believe in the Human Genome Project we realized that only two percent of DNA codes for proteins. And so, what we thought about was that a lot of this extra DNA is what's junk DNA. But it actually isn't. There is obviously a purpose to everything in the body. And five to eight percent of this is retroviral.

And so, what that means is that part of our own DNA; let me take a step back. When retroviruses are triggered in the body, a retrovirus uses RNA to make DNA. And again, I know a lot of people listening are probably not into science as much as we are. But I just want to give a high-level overview here. But the retroviruses use an enzyme called reverse transcriptase to make the RNA into DNA. And that DNA becomes part of our own genetic material inside the cell.

And so, now we have this pro-viral DNA that turns on in our cell. We learn that when these retroviral DNA pieces are activated that it leads to auto-immune illness, neurological disease, and cancer. So, I guess most of us want to know why do these things get turned on, and how, of course, do we turn them off so we can prevent and treat these chronic illnesses that we're seeing in the office.

Jay: I love how you said "junk DNA." And then you kind of had a smirk on your face like, "Yea, there's probably a purpose. We just don't quite get it yet." It's kind of like, "Oh, the appendix; we don't need that. Let's just take that out. The gallbladder, not a big deal."

Christine: I know. We learned in science if we don't know something, we call it junk or idiopathic. And then years later we're like, "Oh, that's what this was all about." So, I just laugh when we come up to these topics and terms.

Jay: I know. It's kind of a random topic. But I was thinking about, okay, so, we're always trying to interpret what is our DNA. But have we ever really gone down the route of how do we unlock our DNA? Maybe there's a lot to our DNA that we have to unlock. And it kind of made me think of that when you mentioned the junk DNA and your smart cell.

Christine: Yea absolutely, absolutely.

Jay: So, we've got endogenous retroviruses that are basically embedded in our DNA. And then you said through stressors that these things can trigger and then cause health issues.

Christine: Exactly, exactly. And so, what we have found, so, there are a number of things that can trigger the expression of this retroviral DNA. So, one topic that many of your patients and listeners probably know about is the idea of methylation. So, methylation is this whole biochemical process that

happens in the body where we're moving methyl groups in biochemistry, which is the carbon and three hydrogens. And what that means is that methyl groups can silence parts of our DNA.

So, if you are undermethylated, having not enough methylation support or cofactors; so, not having enough maybe methylated folate or SAM-e or methyl B12 in your body, you might have what's called undermethylation. And then your body isn't able to silence these segments of DNA. And then that can be one trigger of retroviral exposures. So, we look at the topic of methylation.

And so, you know, Dr. Klinghardt has been practicing for a long time. And we've learned so much about genetic SNPs and how to integrate this into practice. I think it's absolutely important and relevant. And we're learning what to do about the genetic information that we're getting.

But I think we need to look at this in the context also of how does this interact with our immune system and really what does not having enough methylated folate mean, right? Does it mean that not only, of course, all of the important parts of biochemistry and hormone metabolism and neuro-transmitter production and all of that plays a role? But from our standpoint, it's critical in order to have a healthy immune system to keep this viral DNA silenced.

Jay: How did we ever really come to discover this? Part of me thinks we just assumed that it's like genetics. But you're saying that it's actually like retroviruses within the genetics that then trigger it. Was it Dr. Judy Mikovits that really discovered it? Or was she more of kind of a pioneer in some other areas?

Christine: Well, her whole story is really around studying the chronic fatigue population. So, in her research she was able to identify how retroviruses played a huge role in chronic fatigue. From our clinical standpoint in the patient population we see, I turn to her as the expert. She works with Frank Ruscetti, her mentor. And then she has definitely had her pulse on this knowledge.

But also, when you look at PubMed and you're interested in this topic, and this is a topic that's really well known in science. And there's not only, of course, the study of HIV and looking at endogenous retroviruses. They look at this also from a medication standpoint.

Like can we use this to our advantage to also fix DNA? So pharmaceutical companies know about retroviruses very well. But the point that I'm trying to make is that obviously this is a complex topic. And one of the issues when we look at the methylation, which is a big topic, I just want to bring in the context

of methylation, it's really important to keep our immune systems healthy. I mean, I know that you and I both look at health in a very similar way.

You know, when I think of how do we maintain our health and how to prevent chronic illness and disease, there's this whole idea of nutrition and take a multivitamin, which is important. But I think about, okay, what are we doing to keep infections under control and our immune system and strong, and not allowing not only retroviruses to be expressed, but all of the other infections that we look at? I think health is being resilient to all of the pathogens that we encounter in our environment.

Jay: So, retroviruses have become more; I mean still I feel like the early frontier in understanding these and kind of putting them into practice in functional medicine. And, of course, you and Dr. Klinghardt have been instrumental in getting the word out and even practicing healing people and helping them through this. Where do you see viruses, then, fit into the retrovirus picture?

Christine: Absolutely. I'm glad you brought that up. So, when we think about triggers, we talked about being under-methylated. And then, you know, viruses are big. Anybody who looks at a chronic illness patient, we look at a number of pathogens. We look at Lyme and co-infections. We look at parasites. We look at mold.

And then, of course, all of us look at the viral picture. And many of our patients have had a lot of viral exposures. They might have had mono or Epstein-Barre that becomes reactivated through the stress that they're going through. You could have the herpes family of viruses that are the cold sore virus, like HSV1 or a genital herpes or varicella, which is the chickenpox virus, or HHV-6.

So, this group of viruses, when you run titers on many of our patients, they have huge viral loads, we will say. So, they will have these very high immunoglobulin levels, like IgG levels that if a positive is greater than 20, these are 600, 700, 800. These numbers mean that the immune system is very vested in trying to figure out how to keep this virus at bay.

And so, my awareness around this is, you know, you can give people anti-viral

things all day long. And while they help, do those titers ever go down? Not really. And so, at least I don't see that. And so, then we think about, okay, are the viruses the key issue? Or are they doing something else in our system that is keeping people sick?

And what we're starting to realize is that there is research that shows that the Epstein-Barre virus, as well as the other herpes family of viruses, actually trigger the expression of our retroviral DNA. And so, when I read that, it was kind of a light bulb moment for me. You know, Epstein-Barre, of course, we need to look at that. We need to treat that. That needs to be in our framework when we look at a patient.

But really what's happening is this Epstein-Barre virus is triggering the endogenous retroviral expression. And then when that gets turned on, remember, that cell is going to replicate, and that retroviral DNA is going to be in every cell. So, that's going to create all this retrovirus. This can create immune overactivation and also immune suppression. So, this whole derangement in our immune system that leads to things like Parkinson's, MS, autoimmune illness, cancers, and so forth.

So, it just made me think. And a lot of your speakers are going to give a lot of great information about what to do with viruses. But we really need to look at this in the context of are the viruses one of the key triggers to the retroviral expression? And then if we look at this level deeper and treat the retroviruses, that's when we get people better.

Jay: So, we've got essentially viruses, maybe some other types of infections that could trigger retroviruses, potentially toxins as well. So, it's as if environmental things can then flip the switch on for retroviruses to then express. Am I saying that correctly?

Christine: Yea, absolutely. I think that's an awesome summary of this complex topic. And I think, you know, like anything, I believe what we're seeing while we're seeing such sick people is because of the combination of environmental factors that we all talk about all the time with patients.

And I think if we weren't probably up against all of these, our bodies would have a lot easier time silencing these retroviruses and keeping our immune systems on top of these infections a lot more easily. But I think this idea that it's not just one thing, it's this multitude of toxicities that we're all exposed to that just eventually the body can't keep up. And that's when we see people in our office.

Jay: It's a little tangent of a question, but I guess just more curiosity. So, there are a lot of arguments in the genetic world. Like we did the Human Genome Project, and we're going to figure out the genes that cause disease. And then they're like, "Well, this doesn't make sense." And then the whole epigenetic thing came on of expression of the genes. And now we know like our microbiome, our bacteria, are big keys or expressing of the gene.

So, is this really kind of the next phase of understanding in saying that really it might not be our genes and epigenetics, like the triggering of the actual genes, as much as it could actually be the triggering of these viruses that then change the coding and the expression?

Christine: I agree completely with you. Those are kind of my light bulbs that have gone off while I'm trying to understand this in the context of the clinical picture. And I think when we think of epigenetic expression, we need to think of epigenetic silencing and turning on these retroviral fragments. And that I think is really where I want to learn more and I want see research go. And we're thinking, not that I want to go down this rabbit hole too much, but how do we really identify in the labs when people have this overexpression, their retroviruses are turned on essentially.

Like how do we really look at that? And then how can we bring all of this understanding around epigenetics to work on silencing the retroviruses? And so, Judy is looking at different immune markers. It's just not practical yet as far as these lab markers that she discusses aren't readily available commercially. They're more in cancer labs and cancer population. That world is more accessible to this type of lab work.

But it's looking at differences in the Th1 and Th2 immune system. And the lab work will get there. Also looking at nagalase. You know, if you want to talk a moment about lab work, just even looking at, we look at basic labs all the time and try to glean if this is one of the key factors for people. And although white blood cell count is usually a tip off, many of our patients have lower white blood cell counts. So, that looks at the immune system that's been under stress for a long time.

When you think about a complete blood count, we can get a lot of information around that. And then there's something called MCV, or the mean corpuscular volume. And if that is above 90 to 92, we think about under-methylation; so, people who are low on B12 and folate. And so, that's again if someone looking very under-methylated, we can think, oh, their retroviruses are expressed.

And I don't know about you, Jay, but we see a lot of patient MCV like 97, 98, 99. It doesn't budge no matter how much folate we give them or B12. So, thinking about this other mechanism that's going on, and then looking at also the differences in the type of white blood cells that are more active.

So, in a CBC you can do a differential that looks at neutrophils, lymphocytes, monocytes, and eosinophils, and depending on the percentage of those white blood cells, we can say, "Oh, maybe the immune system is working hard on this infection more." And so, lymphocytes, when they're above thirty percent, we tend to say, okay, maybe this is a chronic viral or retroviral presentation.

And so, I mean you can't just treat labs. Of course, you have to look at the clinical picture. But the labs, you can see kind of in the fine print where the immune system is stressed.

But I agree one other marker that is more readily available is nagalase, which is an enzyme that gets up-regulated when there's a chronic viral load or cancer cells. And Judy and Dr. Ruscio use this marker as well as potentially a marker of high retroviral activity. So, yes, to answer, to circle back more to your question, I feel that this whole idea of epigenetics, absolutely, we have to look at it in the context of how do our epigenetics influence our human endogenous retroviruses, if that makes sense.

Jay: Yea, yea, it does. I mean the take-away for the listener is this is very early on in what we understand for retroviruses. But the important thing is this seems to be a big key with getting people well. I mean in the last year of two of really diving into the retroviruses at your clinics, what have you seen change with clients? Has it been kind of those aha's, like whoa! She just came out of this chronic illness that now she seems like perfectly normal.

Christine: Yea. It's just, again, when you're dealing with this patient population, progress is usually kind of slow and steady over time. And then some people just stop. And we are racking our brains on how to help them and what's under-treated and what to treat. And so, the primary symptoms that I saw is this general energy lift, the fatigue lifting, the energy increasing. And that's one of the hardest symptoms to treat for patients. So that, again, is probably the main thing I've seen personally with my patients, which is not a small symptom to lift for people.

Jay: Yea. So, let's move into the clinical realm. Like what herbs or what things do you find effective for the retrovirus category?

Christine: Yea, there are a lot of things. And we typically put a combination of products together for people. And we use autonomic response testing. So, we

individualize treatments based on the feedback from there. But again, for the listener, all of these things, a lot of them are very safe. So, ask your doctor if this would be appropriate for you.

I think we've talked about methylation enough. But we have that whole idea of support. So, that's one thing. There's also a process in your body called acetylation. That's another way to silence different DNA fragments. And so, acetylation is B5 dependent or pantethine dependent. So, we'll use pantethine, which is a B vitamin in our protocols.

And Judy is very big on looking at the endocannabinoid pathway and looking at CBD products. And depending on what State you're in, you either have access to CBD from hemp or CBD from cannabis. THC in that seems to have a huge immune modulation effect for the immune system.

We also look at skullcap, which I know you're familiar with. But Chinese Skullcap, the active ingredient is [inaudible].And if you want to read about an herb that has so many different properties, skullcap not only increases BDNF, which is brain-derived neurotropic factor; it actually has an antihistamine effect for all of our mast cell patients out there. And then it has a lot of viral and antiretroviral properties. So, it's one of these really diverse herbs that we use either in powder or tincture.

If you're on any prescription medications, I would just caution you with the dose of skullcap, because there are some interactions with that if you're on any prescription drugs. And then we are using a liposomal formula, which is, again, the combination of phosphatidyl choline and herbal medicine. And phosphatidyl choline, whenever you combine herbs with phospho-lipids, it just enhances their absorption and then helps the herbs get into the cell a little bit better.

And there's a formula that Dr. Klinghardt helped formulate call BioPure EN-V. That just came out. And that has phosphatidyl choline, plus it has St. John's Wort. Hypericin is the active ingredient in St. John's Wort. That is anti-viral and anti-retroviral. There's also Reishi mushroom. The mushroom family has a huge effect on our natural killing cells and our immune cells. There's also olive leaf. So, olive leaf is a great retroviral and viral remedy.

We also use bitter melon, nettles, and green tea in that formula as well. It has some synergistic properties. You know, a lot of the research around these herbs are around HIV. There are a lot of studies that show that these herbs are effective for HIV. So, we're using them also to help not only with the exogenous, but also the endogenous retroviral expression. And then we'll use nutrients like selenium. Selenium is great. We know a lot about selenium for thyroid health. But it's also a great antiviral.

And then I think that one other thing in our protocol is we're still on the melatonin kick. And so, we're raising a lot of liposomal melatonin and also transdermal melatonin. So, we're able to get a higher amount through the skin trans-dermally. And melatonin is not only great for sleep and brain health, but it's also neuro-protective and great for clearing viruses out of the brain. So, there's a lot of amazing research on melatonin. And I think just with this excessive EMF exposure that we're all up against, our pineal gland production of melatonin is continually affected. So, I think melatonin is a great tool.

And then if you have access to IV therapy, we use a lot of not only the normal things that are antiviral like vitamin C IV, but we're using a lot of glyceric acid, which is an extract from licorice. That has a lot of great retroviral and viral properties. And then we use UVBI, which is the combination of ozone and then ultraviolet light to deactivate viruses and other pathogens.

And we just started; actually, we just got the Webber Medical Laser, which is from Germany. It's FDA approved, but it uses different laser light therapy intravenously to help modulate the immune system. So, it has red light, green light, blue light, and yellow light. So, that's a new tool that we're really excited about.

And I'm sure there are more things that we use that I forgot. But that's just an overview. And so, our strategy is usually using a combination of synergistic herbs and nutrients and then other strategies to help again silence this retroviral DNA.

And again, you know this very well. When we think about health, we think about resilience. And we have to kind of change our thinking. We're never going to get rid of every bug or every virus or every spirochete, nor should we. That's part of living in the environment that we do. But how do we continue to make sure that our immune system is in charge, rather than the pathogen? And this has been our approach.

Jay: Awesome. I just love how this herb, for instance, Chinese Skullcap, is good for viruses and retroviruses and other things. I'm thinking about I went to Dr. Todd Watts a while ago. And I'm like, "Hey, I've got this thing on my skin, like on my thighs." And he tested and it comes back to some bacteria I had never heard of. He looked into it. It's a bacteria for a roundworm of a dog. I'm like, okay. And then we tested all this stuff. And sure enough, Chinese Skullcap was the thing, and then boom, [inaudible] up. I'm like, okay.

Christine: Awesome.

Jay: Bacteria, too.

Christine: Yea, awesome.

Jay: Then you mentioned bitter melon, too. And I'm thinking that's really great for blood sugar. It's amazing how natural things, like their side effects is, oh yea, by the way, it helps with this, too; rather than medications, like you have all these side effects, like lose a limb, can't sleep, impotence, die early.

Christine: Yea, Yea.

Jay: Natural things just seem like the way to go.

Christine: Yea, absolutely. I'm a big believer in that, of course.

Jay: That's so great. I just love how, just so the listeners know, you are as sweet as you are on this interview as in person. You have like the biggest heart. You just want to help people. You're like whatever is going to work, that's what we're going to use. We're going to work through this with each client and treat them as a person.

So, I just really respect everything that you are doing on the functional medicine side of it, everything with the chronic illness side. Honestly, as a practitioner for chronic illness, it's not easy. There's a lot of stressors being a practitioner in this world. So, I really appreciate everything that you have done for everybody.

Christine: Oh, thank you, Jay. That means a lot. And the feeling is mutual, of course. And I know that when we see the people that we do in practice, I feel very blessed, and I feel very fulfilled in my life and my career and family. And when we see people taken out of their life for not only a month, but decades, that's just one of the most heart-breaking things that we all encounter. So, I'm just like you. How can we get them back into their life and their passion and their purpose more quickly? Of course, this all takes time.

So, I do think that looking at what we just talked about, the retroviruses, again, my knowledge is just limited, but getting more and more with each patient. But it seems to be one of the things that could jump our treatments and just make them more effective and shorten the time for people feeling sick to getting better.

Jay: Awesome. Well, as we wrap up the interview, so, obviously retroviruses are very on the cutting edge, and we're finding out it's a big deal with chronic illnesses. Is there anything on the burner plate that you're kind of looking into or testing out clinically that's like, "Oh, this might actually play a role as well, too," and hasn't been covered much?

Christine: You know, I feel really fortunate that I've been able to work closely with Dr. Klinghardt. He's always putting the dots together on why people are sick. And I think we've been really ahead of the curve in understanding that. And so, my focus recently has been really looking at the world of biophysics and how can we not only use what we know in biochemistry, but how do we also integrate some of these, for lack of a better word, but energy medicine tools.

So, we have frequency specific microcurrent at the office, which I feel I've kind of reignited my passion on learning more about how do we integrate that more into our protocols. Also, I just shared with you the Webber Medical Laser and how do we use more light therapy in our medicine. There are some other companies that we're talking to that do more frequency-based medicine. And that's really exciting to me, just to think that we can treat the body and this whole other modality.

And at the end of the day, it's the synergy, right? How do we combine biochemistry with biophysics to get people better? Especially when we think about all of the electromagnetic stressors, we are up against right now how do we also use biophysics to ground our body and heal our energetic body? So, that's kind of what I've been reading about at night before I fall asleep. But yea, we're trying to put all those tools that we have at the office together in more of a unique way right now.

Jay: You've just got to love a passionate health care provider that's still researching.

Christine: Hah, hah, hah! I know. My nine-month-old has made everything interesting. But on the edges of the day, I still find time.

Jay: Awesome. Well, I want to thank you so much for taking time to do this interview and sharing what you're seeing clinically and just giving your perspective on it, because it's been really valuable.

Christine: Oh, well thank you, Jay. And thank you for putting on this wonderful summit. And you've done so much for the community putting all this wonderful education out there. So, thank you for being a pioneer in doing that.

Jay: Thanks. Well, thank you, listener, for joining me on the viral and retroviral summit. Be sure to definitely check out Dr. Christine Schaffner. Her website is drchristineschaffner.com. So, doctor is dr; then Christine, then Schaffner, then .com. Schaffner is S-c-h-a-f-f-n-e-r. And then what's the Sophia Health Institute website?

Christine: Yea. It's sophiahi.com. So, if you're interested in becoming a patient, we have a lot of information on the website. And we are in Seattle, Washington, in a suburb. And we would love to take care of you.

Jay: Awesome. Thank you for that. So, sophiahi.com. Make sure to share this with your friends, family, and loved ones, and also consider taking it home to own it for your library, as this cutting-edge information will become even more

and more relevant as more people understand it and research continues to blossom. Until next interview, maximum blessings. This is Dr. Jay Davidson.