Bulletproof Radio #731

Announcer:

Bulletproof Radio, a state of high performance.

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Today's show is going to be interesting, at least it will be if you've never heard of a compound called kava. I've covered so many of Mother Nature's, I'm going to call them medicinal plants, on the show whether I've talked about my iowaska experience a long time ago or the amazing powers of coffee as a superfood or even nicotine, where you heard from Dr. Nicotine about what it can do. You realize that certain plant compounds do stuff for people. And CBD oil and cannabis and stuff like that are one of the latest things, and of course we'll see the medicinal mushrooms are just about to be legalized in a lot of the country.

Dave:

So what about kava? Kava's been out there for a long time, and it's something that is mood-boosting, something that I've played with over the years, but I had kind of written off because of concerns that I had about safety that, it turns out, were warranted but aren't warranted by real kava. And I also just could never feel an effect, and I finally found some stuff that worked for me, where I could quantifiably see a difference in my sleep quality from it. And I said, "All right, this isn't a fad." I was kind of concerned it was one of those, "Oh, it's exotic, and it doesn't do anything." I realized it absolutely does do something. So I found a guest who decided to, and thank you for this, Cameron, decided to sponsor the show to help get the message out about it, which is something that I'm grateful for, and to offer a special to you guys listening so you can save some money. You listen to the show, you save some money if you want to try it because knowledge that's expensive to implement isn't as useful as knowledge that's more affordable to implement. And I think this is worth your time and attention.

Dave:

With no further ado, Cameron, welcome to the show.

Cameron George:

Dave, I'm so glad to be here. It's an honor. Thanks for having me.

Dave:

Cameron, you are one of those guys, kind of like me, who said, "All right, I have a personal health issue that's really vexing that's tweaking on me." You found something that really worked, and you said, "You know? I'm going to solve some problems in the industry. I'm going to make something that I couldn't buy, and I'm going to talk about it relentlessly because I think it's worthy." So, because of your deep research and your personal experience with it, you've kind of hit the level to come on to the show where we can go deep on kava and the brain and all this. Let's get started. First, just tell me, what is kava? Then I want to hear about how you found it, but for people who've never heard of this, like, "Kava what?" What is kava?

Cameron:

Traditional kava is a stress-relieving drink that's made from the roots of a small shrub that grows in islands in the South Pacific called Piper methysticum. The word actually means intoxicating pepper, but it's been used in these island chains, mainly places like Fiji. An island chain called Vanuatu that's right next to Fiji is actually the home of where kava was first traced back to. You can find it in Hawaii and Tonga, and you can also find it in places like Samoa and Papua New Guinea. It's all over the South Pacific but exclusively grows in the South Pacific. But it's been used there for over 3,000 years sort of a social-enhancing, anxiety-relieving alcohol alternative. Of course, when it was first started, they weren't even using alcohol, of course. But it's mainly used for enhancing mood, relaxation, mental clarity.

Cameron:

Those are the most tangible effects, but whenever you actually start to dive into the scientific literature and you start to dive into some of the anthropological accounts and talk to the indigenous people, you realize that, just like most of these medicinal plant medicines that are now getting their second day in the middle of this plant renaissance that we're kind of in the middle of, there is multi-therapeutic action because we're talking about a living organism that has all of these different mechanisms that work at all different levels of human biology.

Dave:

So, traditionally, when you go back in time, kava, was it a ceremonial thing? Was it a nightcap? Was it kind of a daily thing? How did it fit into island life?

Cameron:

Yeah, exactly. So kava is actually... It may be the most valuable substance in the whole culture when it comes to the cultures of Vanuatu and even Fiji. It's Vanuatu's No. 1 export, and they use it in almost every context imaginable. They drink it like we drink coffee, and they drink it like we drink alcohol, except they prefer it, of course, over alcohol. There are regular bars in the islands, but there's about 20 times more kava bars in the islands because they prefer it because they can maintain their sobriety. And they don't feel as if it puts them into an altered state or makes them a different person, and there's no addiction and all things that are associated with it. But it's mainly used for weddings, funerals, spiritual ceremonies, social gatherings, virtually every single context where individuals are coming together and trying to connect and trying to experience more of an empathetic connection between one another, and sort of really explore themselves and explore others because there are properties to kava that make it amazing for doing that while not compromising your fine motor skills or leading to drunkenness and any of these things.

Cameron:

It's said in the islands that a man who drinks alcohol becomes a beast, but a man who drinks kava becomes more of who he really is. So it's really seen... It lists sort of a state of calm, enhanced focus. So it's like an enhanced state of sobriety, and that calm focus is kind of like an alpha state that happens to be the prime state for learning and concentration and getting into a state of introspective and creative thinking. It's really a [inaudible 00:05:47] substance to these people in the islands.

Dave:

So it's not going to make you trip balls. So, using it spiritually, it's not like, "I smoked a lot of pot, and I'm kind of lit." I've never experienced that even from higher dose kava, but is that a thing?

Cameron:

Well, no, okay, so the amazing thing about kava, out of all... I've experimented and had pretty extensive experiences with almost every major psychoactive plant substance from the really heavy psychedelics... I've done sessions with iowaska, with psilocybin, LSD, and all these kind of things, and of course with cannabis, medically of course, and especially whenever I was younger and stuff. Kava fits in a category of its own. I think there's a lot of wisdom in the fact, and the indigenous people know this because they have more powerful plant medicines like psilocybin mushrooms in Vanuatu and things, but they choose kava as their main psychoactive that they embrace in their culture because I think there's wisdom in the understanding that the best medicine is not necessarily the one that hits you over the head or turns your whole world upside-down immediately but the one that can be taken regularly and be slowly integrated. And you can continue to get cumulative benefit over a long period of time.

Cameron:

So kava does have minor psychedelic properties, which we can get to a little bit later in more depth. But it has properties that allow you to experience a hint of that state, very similar to micro-dosing, actually, but without a lot of the legal issues. And you maintain your sobriety. It's sort of an enhanced state of sobriety introspectively.

Dave:

Okay. So you're not really going to be tripping, but you do feel relaxed.

Cameron:

Correct, yes.

Dave:

Okay. That's what I experience. I've never even entered a profound alpha state that I'm aware of, and I know what alpha feels because of all the neurofeedback training that I do at 40 Years of Zen and all. But I do notice really profound effects on my sleep. For instance, I'm in the late stages of cranking out my new book, and I go through this two-year creative process where you're building a skeleton. And then you build the muscles and the connective tissue, and then you do the final step where it's like you put the skin on it, and you make sure every word is where it needs to be. So, last night, against all of my sleep-hacking advice, I stayed up until 4 a.m. I do this consciously, and I've got all the red lighting on so I'm not really breaking my sleep. I've actually been doing this for almost a week straight, where I'm just doing 30, 40 pages of just careful word examination, rewriting, adding a reference, and just making it as perfect as I know how.

Dave:

Last night, I forgot to take my Tru Kava. I went to bed at 4 a.m. and I take a handful of sleep stuff. This morning, I woke up and I looked at my Oura Ring, and I was like, "Oh, that's weird, my REM sleep wasn't nearly what I thought it would be." I still slept six hours. I just shifted my sleep later, which should've given me more REM sleep. My deep sleep was just fine because I controlled my light, but my dream stuff wasn't where I wanted it to be. It was only like 40 minutes. Guys, I slept five hours last night. Anyway, because only 40 minutes, that kind of kills most people. But I should've had an hour and 20 minutes, and I think it's because I didn't take the Tru Kava. That was the one variable there, and I've noticed that in other times. So, even under extreme sleep things, it's part of the sleep hacking that works. Is that from alpha, or is that from something else?

Cameron:

Okay. It's important to note, too, because what you've been using is the oil, correct? You've been using the Kavaplex oil, right?

Dave:

Yeah, I love that stuff.

Cameron:

Yeah. So we have the Kavaplex oil. We also have a Tru Kava shot that looks like a 5-hour Energy shot that we just released. Basically, all of our products are made with traditional preparation methods. I can explain what those are here a little bit later, if you want. But the traditional preparation is where you get the real effects of kava. And a lot of what we see on the market are products that are made through solvent extraction, fruit solvent extraction. It cuts down and only absorbs and pulls out certain active constituents and leaves others. So you don't get the full lactone matrix. You can look at this by doing lab analysis and looking at chemotype and the ratios of the lactones. There's other constituents in it, as well, that give it that full entourage effect.

Cameron:

The Kavaplex, though, is specifically designed to be the full lactone complex but to be in a concentration and form that's subtle and the most versatile for all ages to take it virtually most times of the day. Normally, it doesn't knock you out. It leads to a good sleep. That strain that we're using, that strain that we started with is a really balanced strain. But the effects of the Kavaplex are meant to be very subtle and run in the background and to give you all of those therapeutic effects of traditional kava at a reasonable concentration. The Tru Kava shot is quite a bit stronger, and it gives you more of those nootropic effects because we put an extra strain in there from Tonga that has more of a dopaminergic action to it. Products that we're working on in the future are even much more powerful.

Cameron:

Whenever you get up to traditional drink products, you actually have effects that can be pretty indistinguishable from alcohol and really strong nootropics. So the game changes as you go up. The [inaudible 00:11:08] can be very, very different. The Kavaplex, what most people use the Kavaplex for is either for sleep later at night, or they mix it in a [inaudible 00:11:18] style coffee because both caffeine and MCT both help with the absorption because it's a lactone complex, and it really kicks it in more. Whenever you mix it in there, then it really showcases it, brings out the nootropic effects, even of the oil.

Dave:

That's interesting. You get a solid effect from that. I have the shots. I've taken a shot once, but it was just one. I'm a relatively large guy, and I can't say that I was sitting around meditating to see if I could notice those little differences. I probably would need two just because I'm a couple hundred pounds.

Cameron:

Well, and this is actually an important point, too, with kava. There's a phenomenon that the indigenous people have always described, and now we can look in the scientific literature, and we see some evidence for this. The researchers and scientists that work on kava in the ethnobotanical community

have hypothesized this forever, too. But there's a phenomenon called reverse tolerance with kava, where instead of getting the most prominent effects like a pharmaceutical, the first time you take it, and then tolerance ensues, and you downregulate receptors, and then you end up in a state of sort of neurotransmitter resistance, and then you get lesser and lesser effects as you take it over time. You have to increase your dose. With kava, just the exact opposite happens.

Cameron:

So, when people first take kava, especially if you're getting traditional preparations, there is... I always tell people to take the 30-day kava challenge because when I first took it, I got effects, but they were very subtle. And then I started... I was preparing it the traditional way and drinking the big, muddy-water preparation. I was drinking large amounts. After about a week of taking it, the effects seemed to almost double. After about a month and especially two months, it totally changed. So there's a cumulative effect that once you hit that peak, it always remains, but there's a break [inaudible 00:13:02].

Dave:

How did you get to be such a kava nerd? I mean, there are people who are exploring all sorts of things, and then they just fall in love with one thing. How'd you stumble on this stuff? It's not well known.

Cameron:

Yeah. Like so many people in this industry... You've had so many people on this show that have healing journeys and stories. My story was definitely one of those what I call a pain-to-purpose journey, meaning that a lot of these discoveries that I made and even a lot of the other stuff that I'm involved in now... I do writing for other experts in the field and conduct research and so on and so forth. It all came out of my own pain. I got very, very sick at an early age. I was always kind of a sickly kid, I'd say. I mean, most people wouldn't have... But now, looking back at it retrospectively, I know the signs because I know the signs of sickness and susceptibility. I had a lot of hyper-impulse behaviors that I know now were kind of a compensatory reactive behavior because my system was experiencing a metabolic deficit and low energy. So I'm trying to stimulate myself with dopamine from any kind of impulsive behavior to overcome that. You see that in a lot of kids that are hyper-impulsive. So I had some issues.

Cameron:

Because of some of my underlying issues, I ended up compensating in ways that are progressively more toxic. I ended up into drugs at an early stage and stuff and some pretty egregious life circumstances. Things broke down, and then I was trying to do the responsible thing by redirecting my addiction toward something that I thought was healthy. Then I became absolutely obsessed and fixated on competitive endurance sports. Overtraining was my life, and that was definitely a contributing factor that led to the system burning itself out. But I was, at one point, at the time that things crashed, I was running about 150 miles a week.

Cameron:

My adrenals crashed. I ended up in a psychiatrist's office, was prescribed a whole bunch of drugs, amphetamines. Adderall was the main one, and that essentially was the thing that took me out. It was like putting jet fuel in a damaged car engine that's already running too hot. So I ended up developing a huge spectrum of illness, autoimmune illness including seizures and a whole host of different things, ended up chemically sensitive and unable to leave my home for years, actually. I had nothing to do but

scour medical and scientific literature to figure out answers to my problems because going the allopathic road and giving up responsibility of my own health to somebody else was the thing that almost completely did me in.

Cameron:

To say Adderall, and that drug destroyed my life would be the understatement of my life because it took me out completely at that point. I will do anything not to take a pharmaceutical after this. And it's sort of why I got into kava in the first place. How I really found it was while I was sick, things got so bad. Once I had my mind back, as I sort of just alluded to, I realized that my body was totally fried, and my nervous system was fried. It was a complete disaster. My nervous system crashed, and Adderall was sort of the veil that was keeping my nervous system elevated, but it was deteriorating on the inside and just being completely burned out.

Cameron:

When I went off the Adderall, like I said, everything crashed. Brain fog and fatigue don't even describe it. It was debilitating fatigue where I couldn't get out of bed or do virtually anything. Brain fog doesn't describe it. It was more like brain dead. It was the most horrifying thing to experience at that age. And I mustered up every bit of cognitive energy that I had to try to find answers and eventually found my way down the road.

Cameron:

Actually, one thing real quick, one of the places that I went because I knew that I had such bad brain damage from this, and I couldn't really prove it to anybody because it was sort of an invisible thing that people just told me was in my head and stuff. I wanted to just not leave the house. I had to move back in with my parents and all this stuff. But one of the places I ended up going was I went to Dr. Harch's clinic for hyperbaric oxygen in Marrero, Louisiana, and we-

Dave:

Yeah, he's been on the show.

Cameron:

Yeah. Yeah, Dr. Harch, yeah. And I knew he had been on. I remember listening to his episode. But, no, he's a great guy, and what they're doing down there with hyperbarics is great. But that was where I got a SPECT brain scan, just like the Amen clinics do and stuff, obviously. And what the radiologist said whenever they saw my brain on the brain scan was kind of like I've heard you say before about the camouflage thing. It's like, "How are you talking to me right now? This scan is comparable to severely progressed 80 year olds that I see with dementia. I don't know how you could even function or why you're not suicidal." And I said, "Well, I have been suicidal. I've been there, passively." So that was a big thing for me, and years, years later, being able to see a brain completely transform and change after integrating all of the basics and then some of these other things was huge.

Dave:

What you said about brain fog there is so important. I had it the same as you and this sort of crippling fatigue. And people say, "But you look normal." And then they think, "Oh, you're a malingerer. You're lazy." Are you kidding me? I really should punch you for that, but it would just be too much work. It's so offensive because you are pushing and just struggling, but they don't see it. It's invisible, and it's hidden.

Like you, for me, getting that SPECT scan that showed, "Oh, I have a hardware problem. It's not that I'm a bad person. It's not a lack of willpower. It's not a moral failing. It's just something to fix." That's one of the reasons that I became a biohacker, and I've publicly credited Dr. Amen and his work for making a big difference in my life. It was very empowering. "Thank god I'm not just a total loser. There's a reason for it."

Dave:

It made a difference, but I didn't necessarily go down the kava path. I went down all kinds of different paths: neurofeedback and hyperbarics and all this stuff that's become part of biohacking. I knew about the GABA receptor in the brain, very specifically, and people drink, in part, because it turns on GABA, the neurotransmitter that's a relaxing, calming neurotransmitter. It's the one that turns things down. You can take GABA. I used to sell a very specific type of GABA supplement as a part of the Bulletproof stack in the very early days for sleep. And I've always been intrigued because when people drink alcohol, that is, it pushes their GABA receptors. But some people get all... They want to fight. They get belligerent. Some people don't, and it seems very unpredictable. But the people who drink it to calm down tend to have GABA issues.

Cameron:

Yeah. This is a really important point, and I went that we went into Adderall. We talked a little about alcohol and stuff, too, just in drugs that are used that are addictive because there's such a distinct difference between these complex plant medicines and pharmaceutical substances. Then I would put alcohol in that category, as well, too. The entourage effect that we hear about in these plant medicines comes from the fact that a plant medicine or a fungal medicine is a living system. It's a living, intelligent system just like the human body is a living, intelligent system. It has a multitude of different active compounds in it that work synergistically. And they're more what I call biologically compatible because they come from our natural ecology, and we are actually something that comes from our natural ecology. We're like the apple tree on the tree.

Cameron:

We extended out of this world, and there's an intelligence that runs it, and so are the plants, right? So we try to come in, and we try to isolate one individual compound and separate it from a living system, like say cocaine from the coca leaf. We turn a thing that's relatively safe medicine that people, say, in Peru, use like with coca tea on a regular basis, and turn it into the most destructive substance you can imagine because it doesn't have that sort of synergy there that signals on multiple different pathways simultaneously in the body and tells different systems to keep itself in check. The plant medicines take a systems approach to this from a biochemical perspective, and by doing this, a lot of plant medicines have more of a compatibility that protect against the downregulation of these receptors and depleting cause dependency and withdrawal.

Cameron:

So kava has an effect on the GABA receptors and multiple other pathways, but it has more of a modulatory effect that sort of... It's believed now, and there's some evidence to suggest this, as well, that there may be an upregulatory effect that's responsible for the reverse tolerance effect that I discussed earlier. So it's sort of waking up and strengthening the parasympathetic nervous system instead of downregulating it and depleting it, if that makes sense.

Dave:

I have the shots you sent. I have actually used the Tru Kava, the oil that you make. I've used that, actually... You gave me a sample, I think, at the last biohacking conference that I was hosting. By the way, we're going to do a virtual one and then a real one later this year and next year of that conference. It'll be the seventh annual one. But you gave it to me. I'm like, "Okay." People hand me, honestly, stacks of stuff at those conferences. I'm like, "Okay, I know something about kava. I'm going to try this," but I kind of rolled my eyes a little bit, to be perfectly honest, like, "Good god, so many people are giving me stuff." And a lot of it, you read the ingredient label, and you're like, "I'm sorry. I'm not going to take this. I know that you're putting your best stuff forward, but you look at that ingredient list, it's not well-formulated, or you're using ingredients the wrong way. And you put pepper extract in there because you read about it somewhere even though it pokes holes in your gut and all that."

Dave:

You didn't do any of that with your stuff. And I said, "All right, I'm going to try this," and I noticed a difference. That's my bar for any supplement I'm going to take. I should be able to notice a difference or, if I know that it's one of those long-term things that you can quantify, that you have to take it for six weeks or whatever, then I like to quantify it. But most of the time, if you can see or sense or feel it, okay. So, after you gave that to me, I've actually just been buying it on the website for a year or more. Then, when we connected, I was like, "You know, we should just get you on the show because I like it."

Dave:

But I haven't tried the shots. You sent them to me. So, if I take one right now... This is a serious question for you. I am going to be on another... a really big summit coming up here. They're recording about an hour from now when we finish this thing. So, if I take it now, am I going to be tripping on myself, high as a kite, maybe super chill. What do you think would happen?

Cameron:

No. The shot is still very controlled. It still formulated specifically to be able to take almost in any context. It's not overwhelming [inaudible 00:23:51] distract you. It's a combination of three different strains, one that's more nootropic and then two that are more anxiolytic that are on there. But it has a really good synergy. If you took it with some caffeine and with some MCT, it has an amazing synergy. Most of the guys on your team have actually been doing that, and they really love it. We set it up to serve it with coffee there at the biohacking conference before it was canceled, obviously.

Dave:

Postponed. It's going to happen April 16th next year.

Cameron:

Oh, right.

Dave:

So people can still buy tickets. It is actually going to happen, and I'm stoked for that. In the meantime, in October, we're going to have our virtual one. All right. I have definitely put the oil that you make in my Bulletproof coffee in the mornings. Today I'm fasted, though. I've had nothing to eat today. I made the most amazing baby back ribs last night from my own pork from pigs that we raised and ate that. And I'm

going too fast for probably like three days now as I'm in the middle of this writing thing. I'm also planning to stay up really late and continue working on my book. It's in very last stages of polishing and finishing and just making it as perfect as I can make it. It's not going to make me go to sleep early? It's just going to kind of put me in the zone?

Cameron:

No, it shouldn't. With the strains that we use in there, it definitely shouldn't. If you take it any time of day, that's generally not the effect that you get from it. Now, it generally leads to a good sleep later on.

Dave:

That's fine. I want quality sleep when I want the sleep. Okay, I'm going to do it. That means we got to pause for one second while I grab it from downstairs. Hang on one sec. All right. I wasn't planning to do this, but I realized you're convincing me as we go. So I had to go grab this stuff. All right. I've got the oil, the Kavaplex, which is my favorite right now that I take pretty much every night. Even when I travel, I started bringing this stuff with me. If you're going to carry something when you travel a lot, that says a lot. Okay. Now, I've got shots. I've got two of the guava flavor Tru Kava shots. Should I do them both?

Cameron:

I would, yeah.

Dave:

All right. I'm going to see what all's in here: filtered water, kava extract, and you're extracting this with alcohol and heat? What do you do?

Cameron:

No alcohol. They're all traditional extraction methods that we developed. We're using a traditional water extraction with a couple other ones that we developed, as well. Then we concentrate it down. It's the traditional effect. When you extract it with alcohol, it ends up being a little bit like chamomile tea. It's very, very mild.

Dave:

Doesn't work as well, okay. Cool. And let's see. You've got some pasteurized guava juice, fine. Natural flavor, what's that come from?

Cameron:

The natural flavors... We list it under natural flavors, and I'm not even sure... That was actually part of a test batch that was on there, and that label... It shouldn't actually be in there anymore.

Dave:

Oh, so you took it out. Cool. If you're listening to this, natural flavor, that's bad. Here's the thing. Some natural flavors are actually something you want in there. I use natural flavors in my stuff. I just call my ingredient suppliers and my flavor houses. Yes, there's such a thing as a flavor house. And you say, "Where's it come from? What is it?" And like, "We're not going to tell you." I'm like, "Then I'm not going to use it." So you go through, and you find out whether it's actually from plants that are meant to be consumed and all that. Natural flavors don't have to be bad. It's about the integrity of the person who

does the formulating. So you took your natural flavor out. I know about glyceryl, but I don't know glyceryl abietate. What is that form of glyceryl? That one's new to me.

Cameron:

To be 100% sure, I'd have to ask my guys who actually helped me develop the final product. But we had dialed it in specifically to try to be as natural as humanly possible. I would have to check with them, to be honest, because I actually hadn't heard of that previous to this before, either.

Dave:

All right. The reason that I didn't recognize that until I just looked it up is it's an ester of wood resin. It's a plant-based compound that helps stuff stay suspended. You don't want a bunch of crap at the bottom. It would be a clean way of keeping things suspended and one that doesn't have any negative effects that I know of. But that's a new name for me. Then you put a couple reasonable preservatives that actually can have positive effects on the body, believe it or not. All right. So I'm going to give this a shot. By the way, guys, I always read labels before I take stuff, and I like getting to ask people, "Why is that in there? Why'd you do that?"

Cameron:

And this is still the end of the first run that's [inaudible 00:28:23]. Our flavor guys worked with it, and the goal is to have everything 100% organic. That's what we're trying to move to. We're trying to make it as scalable as possible.

Dave:

All right. This is truly my first time ever trying the shots. Dang, it smells like passion fruit, not guava. It's really powerful in a good way. I actually want to drink it now. Is that the smell of kava? Because the oil doesn't smell at all. Or is that just guava I'm smelling?

Cameron:

No, it has a little bit of the kava smell to it, but [inaudible 00:28:51] kava. It's really...

Dave:

I want to smear this on my face. It smells so good. Let's see.

Cameron:

Because normally kava tastes a lot like muddy water, honestly, traditional kava does. Trying to get it dialed in to a palatable formula was [inaudible 00:29:13].

Dave:

Okay. This is really pleasant. You can tell, if you're looking for it, there is an earthy, very background flavor. By the way, I'm a super taster, and I taste coffee for a living. And I make collagen bars that don't taste like shoes and stuff. So I pay a lot of attention in the food and beverage world, but just from a, "Would I drink this on purpose because it tastes like a good shot?" yeah. Let's see what it makes me feel like. Okay. I've got one of those. I'm glad you didn't put sugar in there because I'm fasting today. All right. Here comes the second shot. Okay, here we go. All right, let's see if it kicks in by the end of the show. Should I follow up with some of the Kavaplex just because I'm a dork?

Cameron:

Yeah, I would.

Dave:

All right. I'll chill here. This stuff, it's an oil. I do one or two of these every night, of the Kavaplex. Okay. We'll see how it hits. I actually enjoyed the flavor of that. That was really much better-tasting than I thought it was going to be. So thank you for that. Okay, back to some more of the science on kava now that the visceral side was... I was waiting for a good time to taste that. I wanted to talk to you before I took it because I've been in really strong creative mode between the book, the podcast, and working with some of my other companies. So it's been a really intense time, and you don't want to drink something that makes you high for half a day, right? Even experimenting with a new smart drug or something.

Cameron:

[inaudible 00:30:45] really tried to dial them in for versatility. There are much stronger forms of kava. There are forms that we're looking at in the future, especially with the medical space and such, that have specific strains that really are prominent. None of them really knock you off your center, but they could be a little bit distracting if, say, you're trying to work on something. But then others are very nootropic and are very, very good for working. So I have some specific forms that I use, as well, for that.

Dave:

Something else that appealed to me about Tru Kava because it's kind of a big deal if I'm going to add something to my stack every night for a year. I don't do it that often. I'll play with things, but to reach that thing, it's a pretty high bar. You've gone into some of the science, the way I have with coffee. I'm like, "Hey, guys, could it be that different coffee does different things to you? Because we know different cannabis does different things to you. And the way it's processed, does it matter?" Well, of course it does. Thousands of people, "Dave, I can drink your coffee, and I don't tweak. And I drink normal coffee, and I do." So I know that's real. You did something similar with kava because when you look at the research on kava, there's stuff about toxicity. There's stuff about mold and things like that. Walk me through what you do to make it pure that people should pay attention to.

Cameron:

Absolutely, yeah. When you talk about kava, just like you just now said, we have to be clear about what we're talking about. Because if I say cannabis, I could be talking about very potent, 30-to-1 THC to CBD, hybridized dabs of marijuana, or I could be talking about CBD oil. They're both cannabis. Kava has the same spectrum. It has the same spectrum of different quality. What I sort of alluded to first and before was that most kava on the market goes under the name kava kava, which most of those products don't meet the true definition of kava no more than a caffeine pill meets the definition of coffee because you can't isolate caffeine out of something and call it coffee. Kava is the constituent mixture. So it's the water-extracted drink or form from the roots of Piper methysticum. You cut out a lot of the effects.

Cameron:

But then also most kava on the market, too, there's a lot of contamination issues from three or four major factors. So, because it's a tropical product, just like you've always talked about with coffee... So there's a lot of parallels here. It's a starchy root whenever it's first pulled out of the ground, of course. And if it's not dried correctly and processed correctly, it can develop a lot of mold, which means

mycotoxins, of course. If it's grown in specific islands where they're not using irrigation and such, then you have animals that are grazing the land, and they can crap everywhere. Then you end up with E. coli and different bacteria that you have on it. If it's grown in certain parts, say over in Fiji and other places, they still use a lot of chemical pesticides. So we have to test everything. We've got to test everything for both industrial and biological contaminants.

Dave:

It's not that different than coffee. When you look at how most coffee is water-processed, it's like, "Oh, we took some river water. We threw it in these big cement tubs where birds can poop on it, and then we dried it in the sun." And you're like, "Maybe we could do a little better on some of that." So the control of the process mattered to you. You end up doing lab testing for pesticides and natural compounds.

Cameron:

Heavy metals, pesticides, mycotoxins.

Dave:

Okay. So it's a clean product. I knew some of what you were doing there. That's important just because I don't want to feel weird based on different batches. Do you test for the level of kavalactones? That's considered to be the most active ingredient. Can you define what that is and how you know that it's in there?

Cameron:

The kavalactones, just like cannabinoids in cannabis, it's a mixture of active constituents. There are 18 total known kavalactones. We think that there are probably more, but there are 18 total known, six of which are attributed to elicit the greatest contribution to the overall effects of kava. There's kavain, dihydrokavain, methysticin, dihydromethysticin, yangonin, and demethoxyyangonin. There's a couple double-bonded lactones in there, and lactones are oily compounds that come to the surface whenever you're making traditional kava. But there are other supportive constituents that come out, as well, enzymes and flavonoids and different things that give it its effects.

Cameron:

So we do test for kavalactones. We do a chemotype analysis through UHPLC methodology that looks at... It gives us a six-digit number sequence. A numerical value is assigned to each one of the six major lactones, and it tells us the ratio of those. We can measure the starting material, and then we can measure the material after we do our extraction to see if the ratios have been denatured or not. We compare those and contrast those. We measure for six major lactones, three chalcones called flavokawains, and we can explain the significance of that. Then, of course, we measure for chlorophyll, as well, too, because that'll tell us if we're getting 100% root material, which is the other main thing that we have to test for in kava.

Dave:

Talk to me about strains. I know that there's different strains of kava, and the reason I'm asking, actually, has to do with maca root. Years ago, at Bulletproof, I was like, "Okay. I want to do a maca product for testosterone." This was maybe eight years ago, the early iterations of the company, before we'd settled on how important collagen was and things like that, and some of the other supplement formulas. But

then I did my research, and like, "Oh, wait, there's eight strains of maca, and you use a different one at a different time. So, for men, you need this one. Oh, and raw maca, which is all the rage, is actually bad for you. It should be cooked down and gelatinized."

Dave:

Then I actually bought some that was properly made from an ingredient supplier, very high-end one, and I had it tested through our mycotoxin panels, which are not required by law. It was very high in aflatoxin, which is a very nasty thing. So I said, "I'm not selling this stuff. I don't think it's a good idea." And I never have launched a maca product. So I went through that process, and it really informed me on how messy it can be, as well as how important the varieties and preparation are. We've covered preparation, but how do you know what variety to use?

Cameron:

There are over 200 strains of kava that are used regularly in Vanuatu and Fiji mainly, and then other islands, as well. Just like the world of cannabis, there's all these different strains just like you alluded to, and some are more daytime-oriented, say, and some are more nighttime-oriented. Some express certain ratios of certain lactones that, say, activate more of the dopaminergic effect more than the GABAergic effect. So you've got some that are more mood-boosting, nootropic, some that are more sedating, some that are a good balance of all of them. What we've chosen to use, say, for our first product, we chose one of the more popular strains, and it's a strain called Borogu. It happens to be in a specific sub-class of strains. Because there's two main classifications here when we talk about strains.

Cameron:

There's strains that are classified by effects, which I just alluded to, and then there's a subclassification of... Once you get a strain by effects, then you classify it as either a daily-use kava or an acutely medicinal kava. The daily-use kava, that category has been given a classification term by the governments in Vanuatu. This is where this term started, and it's called noble kava. Noble kava is kava that has to meet a certain chemical composition standard. It has to have a certain chemotype like I described earlier, and it has to have very low levels of these plant-defense compounds, these compounds that express more in the wild forms of kava. Because Piper methysticum is a domesticated form that sort of bred down these compounds. So these are the kavas that have been used daily for 3,000 years, or a little bit less once they dialed them in, and they're the only ones that are consumed daily. The other ones have acute medicinal value, hit a little harder.

Dave:

Kava was banned in Europe for a while. Why did they ban it?

Cameron:

That is probably the most important point that we can make today about kava. Just like most plants in the world of medicinal plant medicines, there are misconceptions and myths that surround virtually everything. There was around cannabis because these are nuanced conversations and just like what we're having right now. It's like, when we say kava, what is kava? We call all kava kava. It's kind of like CBD is not marijuana, and we've spent years now trying to make the clear distinction between CBD that's nonpsychoactive and highly psychoactive marijuana.

Cameron:

The same thing is going on here. Basically, what happened there, there was a series of studies that were conducted in Germany and Switzerland in early 2001 to 2002. This was at the verge of what was about to be a huge kava boom because kava was finally making its way out into the world, even in this subtle extract form. One pharmaceutical company, which I won't name, but it made one pharmaceutical product where they did not adhere to these traditional preparation methodologies. So they got ahold of some unscrupulous farming practices that didn't use, probably, the right parts of the plant, as well as they used acetone extractions, which can leave some of the solvent back in there. They didn't adhere to any of those quality standards.

Cameron:

This has been vetted out over the last 15 years, and virtually every country that elicited a ban on kava has lifted their bans or is in the process of lifting their ban. Germany lifted their ban back in 2014-ish, and so much so that the WHO has even taken a position on these, where they've issued a statement back a few years ago, saying that as long as you adhere to traditional kava, the true definition of traditional kava, that it's safe for human consumption, and there's no evidence in the ethnopharmacological data that it's not.

Dave:

Okay. So it basically was a classic case of regulatory over-aggressiveness. The same thing happened with some amino acids a while ago in the U.S., tryptophan, which a lot of people have heard of, the turkey amino acid that isn't really going to make you that tired. It's overeating makes you tired at Thanksgiving. But tryptophan does create more serotonin in your body, and someone synthesized some tryptophan that was chemically not tryptophan, that had some neurotoxins in it that actually killed some people. So, like, "We're going to ban tryptophan." And you're like, "Wait a minute here. That would be like banning meat because someone sold something that wasn't meat that said it was meat." You're like, "But it's not the same thing." So, apparently, that happened with kava, and 15 years later, I will actually take my hat off to the European regulators who've reversed their decision. Typically, a lot of governments, like, "We made a decision. We're the government. We can't be wrong." So 50 years later, we're still following the same thing. For instance, how long did it take for cannabis to become legal in the U.S.? It's still not legal all the way. It's just because of that reason.

Cameron:

Basically, it was an enigma for so long. Just one quick point on that, it's so much so that this group of scientists who we've collaborated a lot with both in Vanuatu and in the islands and some in Germany, as well, that helped get this stuff overturned, have actually made a proposition several years ago for an international quality standard to be set in place by Codex, be adopted by Codex, which is a co-initiative of the WHO for regulatory agencies to fall behind that lays out these criteria, all the ones that I just laid out about traditional preparations, no solvent extraction, has to be 100% root material, no mycotoxins. And it's supposed to be adopted by the end of 2020, early 2021, if we're lucky with everything with COVID and stuff. And if you adhere to those quality standards, then you can get food classification just like coffee.

Dave:

I'm definitely feeling what I took there. How long does it normally take to hit after someone takes kava?

Cameron:

Yeah. So, if you take it with coffee and MCT, you put it immediately on your tongue, you can feel it pretty instantly. It can take up to 20, sometimes 30 minutes to fully hit, maybe.

Dave:

I feel like in about 10 minutes after I took those, as we were talking, a little bit buzzy, slight spacey, not in a bad way, and definitely more parasympathetic than I was before, so a little bit chill. And I kind of feel like my visual field's a little bigger than it was before. But it's definitely doing something in there. Yeah, it's a mild altered state, I would say, but not in a bad way. There you go. I do not feel that from the oil. The oil, though, just cranks up my sleep quality really well. But this is a different. All right. Thanks for convincing me to do it.

Cameron:

Yeah, yeah. It really is one of those things that sort of keeps on giving the more you use it. It sort of integrates its way into your system, and it really is... You get more used to it. Your brain gets more used to it. I continue to fall more in love with it the longer that I consume it over time. That's what the indigenous people have always said, too. So it's very...

Dave:

From a hard science supplement perspective, I did my research about this stuff before I decided I was going to stack it in, it binds to the GABA receptors kind of the way alcohol does. That's good. It can be relaxing. Calcium channel blocking is something that a lot of people don't necessarily know about, but if you are going to be exposed to EMF fields like when you're flying and things like that, I've explored taking prescription calcium channel blockers to lower the effects of voltage-gated calcium channels. So, if you get exciting of that part of the cell, you get way too much calcium influx into the mitochondria, which cause a massive reduction in how they function, which cause inflammation. That's one of the reasons you get puffy legs when you fly. Have you ever played with using kava when you're flying to be more resilient?

Cameron:

Absolutely. I take it every time before. Whenever I was really sick, and I had a lot of environmental sensitivities because I was so neurotoxic and stuff, one of the sensitivities that I developed was EMF sensitivity, which I never would've believed was possible before. I would've thought that was completely nonsense. That just wasn't on my radar. This was years ago. It wasn't even talked about, hardly ever. But when I started taking kava... My EMF sensitivity got so bad that I couldn't get on a phone call, and I couldn't virtually do anything or communicate with anyone. I was sort of quarantined and was reacting horribly to everything and having seizures, well, too, sometimes set off by other things, but EMFs was one of them.

Cameron:

Whenever I started taking kava, not right away but as it sort of integrated its way into my system... By the way, I was on heavy doses of benzodiazepines to stop these convulsions and reactions earlier on. But as I started taking kava, I noticed probably an 80, 85-ish% reduction in my EMF sensitivities and symptoms, which was just... I mean, to me, it was heaven. I got so, so much relief, and I could get on the phone again, and I could talk. That was from the symptoms perspective, right? But I noticed a very, very quick relief, and it's not like everyone would feel that because a lot of people aren't sensitive and feel EMFs. But that really said something to me, and it wasn't until later on where I was really digging into

the literature and sort of reading everything I could find where I came across all these mechanisms. And after reading Martin Pall's work, which Joe Mercola referenced in his last book, EMF, that was something that really, really stood out to me.

Dave:

So I think there's some value for using it just as a calcium channel blocker. Then, another thing that's listed in the literature is COX-2, which is basically what's in nonsteroidal, anti-inflammatory things like aspirin or ibuprofen or... Actually, acetaminophen isn't in that same COX category, is it? Anyway, aspirin or Aleve or ibuprofen, things like that, and naproxen is what Aleve is, so similar pathway there. And it's also an MAO-B inhibitor, which is an antidepressant. It's a mild MAO-B, not the hardcore stuff, and I think it's reversible, from what I'm remembering. Is it reversible, MAO-B?

Cameron:

Yes, yeah. Yeah.

Dave:

Okay. And reversibility, if you're listening, and you're going, "Dave, what the hell you talking about?" When you're looking at things that push on the MAO system, there are generally antidepressants, but the things that are reversible are good because if your body needs to regulate it, it can. Most of the prescription antidepressants are irreversible. So, basically, once they flip a switch, you can't un-flip, and you want it to be reversible.

Dave:

I don't know. I'm definitely feeling like I took something, as the stuff is setting in. That visual field being kind of bigger, I feel like, not to be super hippie, like, "My aura's bigger," in that there's a sphere of awareness around your body, just where you're more plugged in to things. It feels like it's about two feet bigger than it normally is. And I'm definitely feeling the calming, anti-anxiety effects, but there's still an inner focus and awakeness thing that I wouldn't have with alcohol. With alcohol, I'd be feeling like this, but I'd also be feeling a little bit sleepy. I'm one of those guys who are like, "You know, if I'm really going to enjoy alcohol, I should have coffee with it," so you get the up and the down, right?

Cameron:

Exactly. It's calm but present. It's very centered. It's a centered... It also brings out feelings of empathy, as well, too, especially in larger dosages where it's very, very good... Actually, in Vanuatu and Fiji, the chief of the village, of all the villages, if there's a dispute in the village, the people involved in the dispute are forced to settle it over kava because it really helps you connect. It helps you be right present and sort of put yourself in the other person's shoes and see things. So, subtly, it helps you put things together and reflect, too, on your circumstances.

Dave:

Interesting. Then the other stuff that I came across, and I just want to validate with you, is fat-burning pathways during ketosis or during fasting because it's an appetite suppressant. Anything that makes you not hungry generally makes fasting less painful, but it also turns on autophagy, which is a big part of superhuman, this idea that you can get rid of zombie cells in the body and get rid of weak cells and replace them with stronger cells. Do you know how it does autophagy? Do we understand it that well?

Cameron:

Yeah. So the mechanisms have been pretty clearly demonstrated. One of the main six kavalactones, yangonin, has been shown to be a powerful activator of AMPK, so the adenosine monophosphate-activated protein kinase pathway, which is a fat-burning and cellular autophagy activating pathway. It puts the body into kind of a recycle mode. So, whenever food is not present, it tells you to eat from its own. And it's so smart that it'll eat the bad stuff first, the usable energy as fuel. And that's another one of kava's protected mechanisms. All of these effects of kava really... Kava really, it's signature, I think, and it's life force, if you will, from a philosophical perspective, it's a protective substance. That's why it has... protective pathways from reducing glutamate levels through GABA and sodium calcium channel blocking to activating cellular autophagy and turning over fat into ketones. All of these things are protective, and the same thing with COX stuff and everything and the NRF2 upregulation, as well, that occurs. These are hormetic stress pathways.

Cameron:

With the fat burning, though, it's known as an AMPK activator, as well as a suppressor of M4. That's like a seesaw. You've got your recycle and renewal on one end. You've got growth, and you've got autophagy. It supports that pathway, similar to coffee. We know coffee mobilizes free fatty acids. That's why it's so synergistic, too, with that.

Dave:

In fact, the AMPK pathway is something else coffee does. So, yeah, it would stack well with coffee. Well, I'm intrigued. I admit that I really focused on the oil because I'm like, "Wait a minute, this stuff really works in a really meaningful way." Now that I'm feeling the shots, it's different. I'm going to have to take a few more shots and see how I can dial that into my day. And any time you find a natural compound that's been used medicinally for thousands of years that has broad-spectrum use across these things: "Oh, my brain works better. I have less anxiety. I have better focus. It helps me lose weight," and all that, one side of your mind is going to say, "Oh, that's too good to be true." The other side of your mind is going to say, "Well, wait, why have they been using it for thousands of years? What are the downsides?" And you look at the downsides, and it's, well, is it created properly? It doesn't look like there's a lot of them, at least not that I could find. What are the downsides, though? I mean, this can't be perfect. What would the risks of kava be?

Cameron:

Just like we talked about earlier with some of the stronger plant medicines, that they're really strong tools, and they have therapeutic application, and context matters, the thing about kava that I 100% honestly say is that it probably has the best therapeutic effect to drawback ratio of any powerful medicinal plant compound that I've ever come across because... not that it has no drawbacks because, especially if you get the strains right... If you get the strains wrong, and you get a little bit more... Some of those wild kavas, if you drink a bunch of it, you could have upset stomach. You could have some lingering grogginess that comes through the next day. But we've dialed it in so, so much that whenever you get these amazing strains in these really palatable forms and gotten rid of a lot of the tannins, certainly gotten rid of all of the plant-defense compounds and things, you end up with something that is so smooth and that is so pure and that has cumulative benefits over time.

Cameron:

And kava's been well, well demonstrated to be completely nonaddictive. To have the effect on dopamine that it does, to be able to boost mood and elevate mood in the way that it does and act like a benzodiazepine, for me, it was a tremendous step down or transition off of benzodiazepines. I was able to get off benzos in two months by taking it, which is unheard of. And benzos are a silent epidemic just like opiates. We've seen it help in opiates, too.

Cameron:

But when it comes to the drawbacks, it's mainly just some people can have a reaction or intolerance to anything. Maybe some people, it'd make them feel a little bit too spacey and stuff. But with these really pure, noble kavas, there are so, so few drawbacks. The only things I can think of is there are rare allergies, very rare that sometimes people have with their skin, and that's really it. I've taken kava for extremely long periods of time, stopped cold turkey, and I felt better before. Literally, I've never seen or heard of a true kava withdrawal. Even coffee, as great as it is, it's possible. So it's really a unique substance.

Dave:

Well, Cameron, thank you for sharing all the details, and thank you for offering a code for listeners. If you guys are as intrigued as I am, I've been doing the Kavaplex for a year before I had Cameron on the show. **You can go to gettrukava. That's get, T-R-U, kava.com, and you can use code dave15. They'll give you 15% off.** Try it. Firstly, try some of the shots and see what you feel. I'm feeling really good on the shots I've had. I definitely felt it come on probably 10, 15 minutes after I took it, and I'm feeling pretty chill and focused. And I'm speaking in complete sentences, which is a good thing. Cameron, thanks for doing the deep work it takes to make something where you don't just, "Oh, I'm going to call up a supplier, order some powder, throw it in a capsule, and then put a pretty sticker on it," which unfortunately is happening a lot. Anyone who listened to this episode understands you've done the deep formulation work that's required to make something that actually works.

Dave:

I've got to say I'm pretty darn impressed, and when I don't take it at night, I notice a difference on my Oura Ring score every single night. So the two things that have made the biggest difference in terms of substances that I take at night, the stuff that I take all the time... I take Kavaplex, and I take the Life Cykel Lion's Mane Australian mushroom extract. I've had those guys on the show for the same reason, like, "Okay, if I'm using it this much, I'm going to be willing to talk about it and help listeners understand that I think it's worthy of merit." So I genuinely appreciate the dedication you put into this. Congratulations on recovering both from the addiction side of things and just from having your health be trashed the way mind was. Anything else you'd like to say about kava that we missed?

Cameron:

Yeah, I mean, just to say real quick, first of all, I just want to say how much I appreciate the work that you do because when I was sick and I was in the deepest, darkest state of just hopeless desperation, where I was quarantined, and I'm a young kid, and life was over for me on paper... Every bit of logic in me said that I would never make it out of my circumstance. But I valued life so much, and a lot of times, that was largely due to perspective change I had through plant medicine and just through the humbling experience of getting sick, but I really reached out for inspiration, for people in the field who could show me that it was possible. You were absolutely one of those people for me. So I'd say thank you so much,

man, for that. I'm just really, really excited to be a part of it, and I was really, really excited to come on the show because I so respect everything that you do. Thanks so much for having me on, man.

Dave:

You got it, Cameron. Thanks. Guys, gettrukava.com, T-R-U not T-R-U-E, gettrukava.com. Use code dave15, save a little bit of money. Give the stuff a try for your sleep or just to be calm and chill during the day when you're tweaking about whatever you're tweaking on. I think there's merit to this. Have a beautiful day.