

Dave Asprey ([00:01](#)):

You are listening to the Human Upgrade with Dave Asprey.

([00:07](#)):

You are listening to the Human Upgrade with Dave Asprey. Today we're going to talk about lasers, and when I say that, you can sort of imagine me putting my little finger up, lasers lost in power style, but lasers have been a part of biohacking for a long time. In fact, one of my first, in fact, the first discovery of light therapy that I ever had was sometime in the mid to late nineties. I bought a laser that was approved for race horses but not humans because it fixed whiplash in three minutes for me, and I was so blown away. It's what inspired me to start one of the first light therapy companies for consumers, and it was sort of my opening into the whole world of lights and medicine and circadian biology and biohacking. So you fast forward 20 something years later, you can do stuff with lasers.

([01:04](#)):

This is a special mini episode of the Human Upgrade where I just want to introduce you to people who are doing new and innovative work in the world, and they're short and it's about cool tech and gadgets that you will be able to try at this year's biohacking conference. So if by the end of this little episode you're not curious about this, well, you're probably not listening. And if you're curious about it, come to the conference and see what it is and actually feel it. So with no further ado, Dr. Brandon Crawford, welcome back to the show.

Dr. Brandon Crawford ([01:38](#)):

Thank you so much. Yeah, that's interesting. Racehorse lasers were a big deal back in the day. There's still a huge deal. I actually am going to go work on some racehorses in Florida here in the very near future. And yeah, it's interesting you say that because that's been going through my mind here recently. I like to think of myself as a racehorse, just to be honest. I think you do too.

Dave Asprey ([02:04](#)):

It's funny, a lot of times the FDA says, oh no, you can't do that on humans. But the most valuable humans economically are usually professional athletes, just like race horses followed, well, maybe followed by high-end CEOs, and would you imagine those are the first two groups of people who really went into biohacking hard? When I started the movement, we had hedge fund managers and tech entrepreneurs and professional athletes and actors and musicians and high intensity people. These are the racehorses of humans. And since the FDA says, oh, you can't use that, we're like, well, fine. I'm a horse. That's my identity for today. And then you get to use the laser. Right?

Dr. Brandon Crawford ([02:44](#)):

Exactly. No, that doesn't surprise me at all. I mean, these are the people. We are the people that we have to continue to push ourselves really so that we can continue to change the world, right? Because we're the world changers. Who else is going to do it? We have to do it. So we have to take care of ourselves so that we can really move the needle.

Dave Asprey ([03:03](#)):

You've been working with lasers for years, but you are actually launching the first product at 5 28 Innovations at the Biohacking Conference on May 28th. By the way, guys, subtle plug biohacking conference.com. If you're not actually there in person, it's probably because you could have failed as a human being and there is still time. There's still time for redemption. Come to the Biohacking

conference now. This is going to be the most fun that you've ever had. This is our 10th anniversary in person and our 12th anniversary, including the dark years of certain lockdown things. So why a new laser man? I mean, laser's been around forever.

Dr. Brandon Crawford ([03:47](#)):

Yeah, that's a really good question. I was growing a little frustrated because there's a huge major, there's a major gap in the market. The crazy thing is that technology continues to advance, but lasers were not really keeping up with that trend. There's ways to manipulate the laser beam so that we can enhance biological effects, but no one was doing it and the science is there. It's clear as we gain more insight into things like quantum biology, quantum physics, et cetera, there's things that were left on the table. And so finally I started thinking about it, talking about it with my partner, Kevin Johnson, who's a software engineer. We said, no one's doing this. Why not? Let's do it. Right? And so we created something that is connected. It's transformative, it's highly personalized.

Dave Asprey ([04:40](#)):

How big is this bank? Is this like a key chain? Is this the size of a truck? Give me a sense.

Dr. Brandon Crawford ([04:46](#)):

So it's a little bigger than your phone. So I actually ended up, I'm at my house, the laser is at my office. I didn't go into the office today. We had tons of lightning last night. There were some electrical snags in the office, so that's why I'm here. Otherwise I'd grab it and show you. But it's a little bigger than an iPhone. It's thicker than an iPhone. But we wanted it to be very portable because we want this to be usable. Yes, at home by the biohacker. We want you to be able to use this before a meeting. We want you to be able to use this after you take a run, whatever if you're traveling all over the world. But we also want this to be extremely versatile for the clinician. So that's what we did. We made something that is, it's never been done before, but it's not just a device. We created a platform and we're going to continue to innovate on that platform in various ways. So that's from a software perspective to guide you in how you use the laser. I'm trying to take my brain and put it inside that device so we can guide, use safely and effectively, but then we're also going to be innovating on what we can plug into that hardware to enhance the biological effects so we can activate different systems and just get better outcomes. So that's what we created. We created a platform.

Dave Asprey ([06:07](#)):

You talk like such a doctor. We created a platform for better outcomes. Am I allowed to make fun of you?

Dr. Brandon Crawford ([06:12](#)):

Absolutely. My wife does all the time,

Dave Asprey ([06:15](#)):

Again, trying lays laser on my face and turn off my humor centers next time we hang out.

Dr. Brandon Crawford ([06:19](#)):

It's funny you say that. I've actually been looking at retinal illumination, right? So I'm actually looking at how we can change our brainwave literally in a matter of seconds. We've been doing this through the eye, obviously safe dosages, et cetera. So

Dave Asprey ([06:34](#)):

It's called television, isn't it?

Dr. Brandon Crawford ([06:37](#)):

Absolutely. They know what they're doing. They know what they're doing.

Dave Asprey ([06:40](#)):

Just joking. So basically you're talking about lasers in the eyes, but lasers just for people listening, don't shine lasers in your eyes. Even medical lasers, unless it's designed for that, even if it's a party laser, you can fuck up your eyes. It happens all the time, especially at raves and things like that, where the lighting engineer, oh, look, there's a laser on your face. That's a bad sign. Anyway, keep going. So talk about lasers and eyes and on faces and brains, but without blindness,

Dr. Brandon Crawford ([07:05](#)):

Right? Right, right. You're right. We're using very specific dosages. That's a great segue to really talk about the type of laser beam that we've created. We've actually created a higher power laser beam, but a much safer laser. And this is part of that innovative technology that was not being leveraged. So we have a team of optical engineers, software engineers, mechanical engineers, and they all thought we were crazy. But basically we've been able to create this higher powered laser, but a lower safety rating. So it's a class three R, which is a big deal.

Dave Asprey ([07:40](#)):

I want one of the first 10 that comes off the line. Will you sign it for me?

Dr. Brandon Crawford ([07:45](#)):

Absolutely. That's the plane. You bet. But while we were doing this, just another segue, I'm really excited about this pilot study, just to be honest, because obviously our thalamus is very connected to our vision. 25% of the thalamus is dedicated division. The thalamus generates our higher order brainwaves. And so when I started playing with this, you can change a brainwave by shining the specific modulated laser into the eye from a certain distance away, and brainwaves changed immediately and then stayed, right? That was the big deal is that they were sustained for a longer period of time. It blew my mind. And so those are some of the things that I'm working with right now just in pilot studies in my office. Super exciting.

Dave Asprey ([08:29](#)):

And for people who didn't see the full episode with you, I mean, you're taking kids with brain damage and using lasers at specific frequencies and you are repairing their brains. And I've used your laser on my brain. I've showed your previous laser, the great grandfather of the kind of tech that you've just developed. It works. We've used lasers at 40 of zen at various times also to activate parts of the brain and for people who are going, what do you mean lasers on the brain? You're insane. You have a skull, you can shine light through bone. That's how it works. And my first brain stimulating light therapy was

made by a guy on a Yahoo group who made a couple hundred of these little 808 nanometer infrared high-powered LEDs that are not as good as lasers. And that thing restored some of my brain function.

[\(09:24\)](#):

And when I used it for too long over my language processing center, I spoke in garbled sentences for about four hours and scared the crap out of myself. So there's no question that intense light can do things to the brain, but what we know now that we didn't know back 20 years ago is the color of the laser. And people confuse frequency and color with lasers a lot. So the frequency of light is defining its color. So when I say 808 nanometers or six 60 or something, like six hundreds are reds and eight hundreds are infrared, but there's also lasers can blink rapidly, and that's another frequency on top of the first frequency. And as I understand it, you're doing both right?

Dr. Brandon Crawford [\(10:11\)](#):

Correct. Yes, we are doing both. And we're actually going a little bit beyond that, but you're right. So the wavelength is going to define the color of that laser. And so I love 808, like you mentioned, 808 nanometers. I love 975 nanometers. 975 is actually something a little newer that we're bringing to the market

Dave Asprey [\(10:33\)](#):

Because of, I haven't played with that before.

Dr. Brandon Crawford [\(10:35\)](#):

So I did a huge research review and found that specific wavelength within a reason, a variance of about 20 nanometers depending on the study, really seemed to influence exclusion zone water. And what we're seeing now is that exclusion zone water is actually acting like a chromophore in and of itself, which means it's actually acting like a light receptor in and of itself. And so that's exciting.

Dave Asprey [\(11:03\)](#):

Okay, let me ground our listeners in what we just said. Exclusion zone water is a special form of water that is inside your cells. It's what your cells use to make energy to do all their cellular processes. And the guy who pioneered this work is Dr. Gerald Pollock, who's been on the show and years ago I funded research at his lab and he found that butter oil, not necessarily cream, but butter oil GH in the presence of infrared light, which is what you're talking about, formed the highest exclusion zone water that he'd seen. And this is a fourth phase of water. And so people say, that's not real. Well, there's entire textbooks about this. This is real, and you can see it on a microscope. It's not one of those things that there's questions about. We don't know everything about it, but if you can see it and recreate it and what makes it better or worse, that means we've got something that's quite real.

[\(12:00\)](#):

And what you're saying is that you found a frequency of light that when you shine it into the body that it helps to make exclusions on water. And this is important, otherwise, your mitochondria have to burn energy to make exclusions on water to convert the water you drink into water you can use to make energy. So whether you're drinking butter in tea like I did in Tibet many years ago, or butter in danger coffee because it's got the minerals and all that stuff, that's one way of getting exclusions on water. And you can take a part of the body where the muscles are knotted and sore or a part of the brain where it's underactive and you can activate the water with a laser, which then allows cellular processes to start functioning again. Did I get that right?

Dr. Brandon Crawford ([12:43](#)):

Absolutely, yes. And it's vital because once you have this cellular swelling, if you have an injury or something like that, you begin to lose efficiency within the electron transport chain within the mitochondria. And so you need that exclusion zone water then to generate more electrons through the electron transport chain. So without it, that's what really leads to a lot of the chronic inflammation issues. So yes, absolutely.

Dave Asprey ([13:12](#)):

How much is a laser?

Dr. Brandon Crawford ([13:13](#)):

So we have various ones. So we've got the 808 nanometer and the 975 nanometer. Both of those are coupled with a red 638 nanometer. So we're going to have two different modules being released. The 808 nanometer coupled with the 638 is 9,900. Yeah, the 975 nanometer, coupled with the 638 is going to be \$1,000 more. There's going to be a package deal with them together. There's going to be special discounting for the biohackers specifically at the conference. So there will be special pricing at the conference and then for about a month afterwards. But here's what we did. We literally said, look, we want to source the best. We will only want to provide the best. So everything is premium, everything is top of the line. We definitely did not skimp on this. So this is a very high quality device and you're going to get very high quality results.

Dave Asprey ([14:16](#)):

I want to say something here. There are lots of people listening to the show who can go out and spend 10,000 on a laser and you'll be glad you did. If you do it just because you have it at home and when you have a headache or something or a joint pain or something, you can handle it. There are a lot more clinicians on here or chiropractors or health coaches and incorporating a laser into your practice, it's pretty amazing. And if you're saying, well, I'm neither one of those, come to the hacking conference and try it out. And that's the whole idea in that there's the chance to experience it or find a clinician who has one, and then when you go in to get an adjustment or go into the doctor or go into a brain place, suddenly there's a laser that can do something that otherwise wouldn't be possible. Yes. So this is a cutting edge biohacking tech. It isn't yet consumer pricing and maybe it will be, and a word of caution. You can go to Amazon and buy a quote medical laser for about 69 bucks. It's just a laser pointer. And can you activate acupuncture points by shining a laser pointer on them?

Dr. Brandon Crawford ([15:25](#)):

Sure, absolutely. There's actually research on that.

Dave Asprey ([15:27](#)):

You can, it just doesn't do very much. It's less than a needle, but it's very low cost. What we're talking about here is one of those things where two minutes of it, you feel your state change. This is very powerful clinical grade tech, and the difference is power frequency, pulse rate, and also the stability of the power supply. So the cheap lasers, you can't see it, but they flicker a little bit because the battery doesn't deliver consistent power. And bottom line is getting the signal into your body, which is the very basic definition of biohacking, change the environment around you and inside of you so you have control of your own biology. Well, the environment around you includes light, but if you get a dirty signal versus a clean signal in, it's different. The sun, when it's giving you light, it's a clean signal. So the

better the quality of the laser, the better the results, as long as it's the right frequency and if the pulse rate is the correct one.

[\(16:22\)](#):

So I'm really excited to try out the new laser and just as a clinician, I know you really, really know your stuff. And guys, I want you to go to 5 2 8 innovations.com to learn more. It's 5 28 as always says it, but the URL is just the number 5 2 8 innovations.com to learn more and go to the biohacking conference@biohackingconference.com and meet Brandon. Talk with them. Tell 'em about that weird brain thing you have, and he'll be like, oh my God, shining up your left nostril. And then who knows? One eye might be bigger than the other. I'm just telling you, this is not a weak laser, and most people are just shocked at the state change. You shine it over the center of your chest or over your GI tract or over your vagus nerve. This is kind of a magic wand. So I am really excited about this and I am looking forward to seeing you there. Thanks, Brandon.

Dr. Brandon Crawford [\(17:15\)](#):

Absolutely. Thank you, man. And as always, thank you for creating this movement. Life year was just amazing, being able to see all the lives being changed. So thank you so much.

Dave Asprey [\(17:26\)](#):

You got it my friend. You are listening to the Human Upgrade with Dave aspr.