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Joining us today is Dr. Gideon Shapiro the Vice President of Discovery of Bright Minds Biosciences that trades on our OTCQB Venture Market under the ticker "BMBIF." Bright Minds is a biotechnology company dedicated to developing next-generation therapeutics to improve the lives of patients with severe and life-altering brain diseases, mental health and neurological disorders. Gideon - thanks so much for joining us today.

Dr. Gideon Shapiro

Thanks for having me.

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So getting in tell us about your professional career as a chemist and how you became one of the leading scientists creating novel psychedelics to treat mental Health disorders.

Dr. Gideon Shapiro

Sure, thank you so I started my career in graduate school I went to Berkeley and trained as a synthetic organic chemist. Where basically we learned the trade of how to synthesize molecules which is how medicines are made and discovered. And that was a long time ago I won't say when but in the course of my studies I actually read Albert Hoffman's book Lsd my problem child was fascinated with that also experienced psychedelics myself and know what knew what they could do and as my career would have it I went to Switzerland. Ah, to do a postdoc in Zurich and saw Albert Hoffman speak about his experience and what he did and he did that at Sandda's pharmaceuticals in Basel Switzerland and I wound up taking a job in the same central nervous system department in Bosland Switzerland that sand does so. An interesting career path I actually started out in in Alzheimer's disease back in the in the late 80 s but then moved into neuropsychiatry and really, you really have to know and be working for many years brain drugs are very special of the skill set and the knowledge to do that. And then the next phase of my career I became an entrepreneur started an o of artists venture company back in 98 but then over the last fifteen years have been involved in really the first generation of people don't really call it psychedelics but was working. Ah, to come to a breakthrough in psychiatry and in my previous

company called rugen and where it was recognized that there really hadn't been anything new from a molecular standpoint or drug mechanism standpoint since ah, the ssri and those drugs that everybody knows in probably about 50 years um and so I'd already been working fifteen years ago on trying to really have new approaches to treat brain disorders looking at the brain holistically as a circuit but also understanding what molecular targets could be new. They could really make a difference over current therapies. And in parallel the same time. Essentially we discovered and stumbled on the ketamine mechanism independently which is now marketed as sprovato and recognized as the first major breakthrough. In in psychiatry and treating depression probably in 50 years it was on the cover of time magazine and we were already looking at that point for basically better treatments than ketamine second generation that would again have the same mechanism which is called nmda receptor.

Dr. Gideon Shapiro

So that's really the first. The first foray that we know that this new class of drugs can work and the excitement is they really are revolutionary. They treat major depression. They treat serious depression which there's nothing suicidality really serious conditions. The current therapies like ssri don't really work for. And so when psychedelics came along basically and Bright Minds approached me this. This was really already very familiar to me this mechanism that you could really have a drug you could take once once and it would have a profound effect without taking a daily pill like an ssri. And just the powerful essentially a brain reboot that you get with these psychedelic medicines that seem to be even have greater potential than the currently approved ketamine or sprovato that's approved and marketed by J&J so that really that insight over the last fifteen years has really ah proved a great advantage to creating what we're trying to do which is again improve upon this first generation of psychedelics which are natural products like psilocybin and mdma that do have limitations. They're efficacious. But from a drug standpoint. There are liabilities where you would want a second generation of superior drug to address the issues that they have.

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So talk about Bright Minds drug development programs and the types of disorders you are currently targeting.

Dr. Gideon Shapiro

Right? So the programs we're doing essentially as I just mentioned the focus is on the second generation improvements over the current psychedelics and the indication for those is essentially really major depressive Disorder MDD is really just the huge unmet medical need where improvements are needed and then there are other you know well-recognized diseases PTSD in neuro psychiatry where you can apply that kind of therapy. And beyond that we're really fortunate. We have a pipeline of drugs as well that are sort of cousins of psychedelics. We've inherited from our other co-founder Alan Kosakowski an in licensed drug related but not a psychedelic but also can treat epilepsies and potentially. Pain disorders. So that's a really exciting new field where it's just been recognized and a drug called fintepla has been approved and that is another serotonergic drug. Not a psychedelic but it's now been recognized that this same sort of cousin or this family. Of serotonergic drugs that that affect five h t two receptors can treat infantile seizure disorders and drvese disease is really the focus now where we see a great opportunity with our other pipeline drug portfolio.

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Tell us about the current progress you've had with scientific collaborations and clinical activities.

Dr. Gideon Shapiro

Yeah, so to really make an improvement and really reach the millions of patients that suffer from depression with a psychedelic you really want to have and a molecular understanding and be able to laser focus target to a specific. Molecular receptor. It's called the five h t two a receptor subtype and so to do that you need really the specialist in the field is really a small group of people who are experts in the pharmacology biology and understanding of finding a molecule and characterizing it to work. So. We have some really I'd say you know some of the leaders in the field in the pharmacology of professor John McCorvey is a leader in in psychedelic pharmacology and receptor profiling and then you need to. Be able to understand and show that it can work in a human so you need the experts in animal models. They're very specialized for psychedelics and we have at UCSD professor Adam Halberstadt who's really a recognized expert in how to do that, so we have the key minds in terms of

academic collaborators. In terms of the basic science that you need to come up with the drug and then we have recognition from the Nih so we're in and Nih has programs specialized programs for epilepsy where they will collaborate with you characterize your molecules so we're in those programs as well. And then we have also for epilepsy other collaborators that are world experts essentially in characterizing drugs for these seizure disorders like Trivas and that's well recognized you against very specialized models and we profile our compounds and show them that. They're as effective in in those models as the other drugs that are being developed with this mechanism so we've got the key thought leaders and the key scientists to help us characterize our drugs and advance them into the clinic in terms of the clinic. We're not in the clinic yet we'll be in the clinic next year so we have collaborators but that's coming next.

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And so on that note, you know in the process that you're going through. Are you seeing any regulatory hurdles or anticipate regulatory hurdles and getting clearance for your treatments.

#### Dr. Gideon Shapiro

So we're sort of lucky because since we're a second generation company. We will have less issues because that's exactly what we're doing. We're making drugs that are safer and don't have the kinds of limitations. For example, this current first generation of psychedelics. They also are unselective and can. Affect the heart valves so that you're very limited in it in how often you can dose as you can see you look at the psychedelics day like psilocybin and you see what clinical trials they've been in. They're only dosed twice maybe over a three month period so you're really restricted and how often you can dose. That's their regulatory hurdle that will is already established. And is going to be a limitation. We will not have that because we're making these molecular 2 drugs that that don't affect these off- targetge if you will receptors that cause for example, cardiac toxicity is recognized by the Fda. It's not talked about a lot because people don't like to talk about the limitations of. The current psychedelics. But that's what we're doing so essentially there are regulatory hurdles very clearly established. We're basically going to have less of an issue than the competitors because of our higher safety.

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The covid 19 pandemic has highlighted the growing issue of mental health. How has this unexpected window of opportunity affected Bright Minds.

Dr. Gideon Shapiro

This has really had a big effect on us kind of surprising to us number 1 is that clearly the covid has really had an impact on mental health people are more depressed stressed. No surprise and that's actually reflected in the sales of current marketed drugs. So the sales of neuropsychiatric drugs from today's generation is going up and what we've seen is that since the pharmaceutical companies have recognized that these drugs are going to be better. The psychedelics offer a lot more potential. We're seeing amazing interest at a very early stage already that you wouldn't have expected typically I never would have expected big pharma to be jumping on to psychedelics because of all, you know the perception and the regulatory hurdles and just the cultural issues. But ah that speaks to the power of these medicines. It cannot be denied and clearly they are going to have a place in a very important place in the future for psychiatric treatment and neuropsychiatry. So what we're seeing is ah a partnering an interest in big pharma which is critical to. Getting these drugs in the market and into lots of patients to millions not just a few and also of course the investors have recognized this I mean there's so much talk about it and people who are investors as well are incredibly interested and it's really helped us accelerate our development and um and are. Move to the market and financing. It's all been tremendous for us.

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And so Gideon for people that may be weary of the use of psychedelics for treatment. How can you ensure the practice is not only safe but also effective and how do Bright Mind's treatments differ from the conventional medicine.

12:03.41

Gideon Shapiro

So Today's medicine essentially is very limited into how and they're very concerned because of these safety issues. Um, people are very careful. So I think from a safety perspective again, you can only get 2 doses over a period of three months so from a toxicity or having a cardiac toxicity ah in the current



paradigm with the current drugs I don't think you're gonna have to worry about that. You do have of course the hallucinations which last can last up to 6 hours before you release and that's probably what concerns. Most people. So for the current generation of drugs that circumscribe again. Our medicines will not have that there's 2 issues that we are doing one is we're taking out the toxicity the potential for cardiac toxicity. And number 2 we're also trying to lower. We're lowering the duration of the trip time for patient compliance. So obviously to go in to a therapist or a psychiatrist and have to wait 6 hours to be released is kind of onerous. So ah. It's really what we're trying to do is make it ah an easier patient experience make it totally safe effective still but also convenient that you can go in essentially and on a more like an order of 2 hours or so go in be treated and be released without the you know. The burden of being captive for so long.

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What milestones and partnerships do you anticipate for Bright Minds in 2021 and beyond.

13:43.50

Gideon Shapiro

So our milestones are clear are the clinical entry. We have 2 2 lead programs headed to the clinic. The epilepsy program for Dravais is first in line for start early next year in 2022 and along the way. There's simply milestones of manufacturing the drug getting it through the animal safety etc. in 2021 and then the same holds true for our psychedelic. We will be releasing data again showing where we are in the process along the path to clinical entry. 2022 in the first half of the year for the first program and slightly behind that for the psychedelic program. Ah, um, it's hard to say there may be corporate partnerships coming as well before that. So. There's so much interest out there clearly. Clearly there are partner opportunities and when they get executed will be what it is but those discussions are in progress and that could actually happen in 2021 but more likely we will do the clinical entry first. To create more value before we do partnering but there's a lot of aggressive partnership discussions going on. This is really a hot field as you can imagine.

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Absolutely so Bright Minds began trading on the OTCQB Venture Market earlier this year and is also traded on the CSC. How has cross trading on the OTCQB market enhanced your investor strategy in the US?

Dr. Gideon Shapiro

Well as you know us investors really can't access trading and the investment opportunity on the CSC on the Canadian market. So the OTCQB has just been very helpful for us to get exposure to us investors to. Enable us investors to participate now at an early stage in the company and derive the value early before we advance into the Clinic. So awareness is spread as well and certainly it's really important for us people keep asking. You know. How they can participate and OTCQB has just been a great vehicle for us to get us investors on board and excited about the company.

OTC Markets Group

Well Gideon thank you so much for your time today. It's been great talking with you Bright Minds Biosciences trades under the symbol "BMBIF" on our OTCQB Venture Market.

Dr. Gideon Shapiro

Thank you very much.

*\*This is an autogenerated transcript and may contain typos.*