



Conscious Life presents

What We're Learning From Ketamine Research

Guest: Professor Celia Morgan

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[00:00:05] Alexander Beiner

I'm here with Celia Morgan. Celia is a professor of psychopharmacology at the University of Exeter in the UK, and her research has concentrated on examining both the benefits and side effects of recreational drugs on cognition, mental health, and neurobiology.

She's been conducting pioneering research into ketamine for the last 25 years and currently runs a clinical trial investigating ketamine therapy as a treatment for alcohol misuse.

Celia, welcome.

Professor Celia Morgan

Thanks. Good to be here.

Alexander Beiner

You've done a lot of pioneering work on ketamine and ketamine research. I thought we could start there because... Actually, the first thing I'd like to ask you is, do you see ketamine as a psychedelic or as a different type of drug?

Professor Celia Morgan

That's a million dollar question. Yeah, I personally do see it as a psychedelic. I know that's kind of contentious. I suppose it's how you define psychedelics, really. I think it's more about the subjective experience. I'm not alone in that.

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Humphry Osmond, who coined the term psychedelic from mind manifesting, he included nitrous oxide as a psychedelic. Nitrous oxide has got the same mechanism of action as ketamine. It works on the N-methyl-D-aspartate receptor in the brain, which is different to your classic psychedelics, which work on the 5-HT serotonergic system. That's where people diverge, and some purists will say, psychedelics are only things that work on that receptor.

But I'm much more about the experiential side, the phenomenology of it, and whether things are psychedelic in that way. I think that then opens up non-drugs to be psychedelic also. But I'll stop there.

Alexander Beiner

Yes, I think that's quite a good definition. It's interesting, I think you're probably the first guest we've had just mentioned nitrous oxide, even though I find it to be... I've had some of my most profound, existentially profound experiences on nitrous oxide, as did William James, of course, one of the, I don't know, godfathers of psychiatry and psychology. So it's nice to get a little mention in there. I also didn't know it worked on the same receptors, that's really interesting.

Ketamine can be extremely effective, It's also got some controversy around it. I thought we could go into the pros and cons of ketamine therapy. So the pros, in your view?

Professor Celia Morgan

Okay. The pros... Actually, we've just started a phase 3 clinical trial here in the UK at nine NHS sites, giving ketamine as a treatment alongside psychological therapy for alcohol use disorder. I've seen it working in people. I mean, that's in a specific group, people with addiction, but it does seem to have an incredible potential in people with treatment-resistant depression.

When you see the changes, one of my colleagues likened it to that film, the Robin Williams film, *Awakenings*, which is actually about another drug, but people just coming alive for the first time following ketamine. I think it's just an incredibly useful tool, and it does have profound life-changing potential for people.

It's got advantages over other psychedelics, obviously, in that it's not a schedule one drug. It's not illegal. It's used in hospitals around the world every day. It's on the World Health Organization list of essential medicines because it's so important in developing countries for anesthesia because it's actually very safe as well, another pro, acutely because it doesn't slow your breathing or your heart rate, unlike other anesthetics.

It's relatively short-acting. When we think about other psychedelic substances, if you consider ketamine one, some of them can take a long time and require a lot of support. Ketamine's duration of peak effects, about an hour. In our studies, people have about two hours to recover and then they're good to leave. Those are, whether you see that as a pro or con, but I think there's some pros. It's basically legal to use, so it's just much simpler to use, generally.

I think when we're trying to integrate it into existing healthcare systems, doctors know what they're doing with ketamine. They can look up in a book what the side effects are, unlike some

psychedelics, the other psychedelics, where there's a lot more, I guess, uncertainty and a bit of fear around compounds that they work with.

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Yeah, there's some pros. Do you want me to go into the cons?

Alexander Beiner

Yeah, let's go into the cons. I was going to ask you next. Yeah.

Professor Celia Morgan

In terms of the cons, people think it sounds quite confused, but I've got two tracks of research that I look at, I've been running clinical trials with ketamine as a treatment, but also looking at non-medical use, some of which is of other drugs also, but of ketamine, and some of that goes into problematic use.

Over the past, whenever I started researching this in the late '90s, looking at people who use ketamine recreationally, some of which do develop problems. I guess compared to other psychedelics, to me, the standout difference with ketamine is there is abuse potential, its addictive potential is greater, I think, potentially than other psychedelics. We do see a significant number of people develop problems with ketamine.

Then amongst other drugs that people become addicted to, ketamine is associated with some specific pathology. People who do develop dependence on ketamine will, some of them, we've recently done some research on this, but a large number will develop symptoms around their bladder, so what's known as ketamine-induced ulcerative cystitis.

Ketamine has this direct toxicity on the lining of the bladder. People will start... The bladder hardens, it becomes people have problems going to the toilet, needing to go to the toilet all the time, and then they start passing blood in their urine. It culminates in some people having to have their bladders removed. I've worked with people as kids as young as 16 that have to go and have their bladders removed. In some people, it has a really serious effect and it can be really dependence forming. It's something that I think is not as widely acknowledged as it should be. That distinguishes it from other psychedelics where we know there's not prominent cases of dependence and addiction.

To me, that's the standout con. There's some other cons about how it's being used nowadays. Another big one, I suppose, is that ketamine renders you almost as... It was called Dissociative Anesthetic by Edward Domino, the person who synthesized it's wife came up with a term dissociative. I think that's why we're trying to reclaim it as a psychedelic, but it's put in that camp as things that dissociate you, but it does really dissociate you from your surrounding environment, and that makes people really vulnerable to things like accidents.

There's recently a high-profile case, Matthew Perry, for instance, drowned in a hot tub after taking a massive dose of ketamine. Drowning is actually quite common with people with addiction to

ketamine. They seem to take some ketamine, get into the bath, and then have misjudged their tolerance and a number of people have sadly drowned.

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So yeah, it's got those specific, much more... Although it's safe physically, you have a much higher propensity for accidents following ketamine. So yeah, that's a big con for its use, particularly. If you're using it clinically, I think that's fine, in a safe clinical setting where you are monitoring people. But if you're taking maybe some of these new emergent trends with ketamine, which is like telemedicine, at-home ketamine use, I think is completely, is not safe because you need to be monitored really, because of these consequences.

Alexander Beiner

Yeah, absolutely. No, it's important to get that broader perspective. I think in the UK, many of us are familiar with ketamine abuse and recreational use in a way that perhaps people in America weren't aware of because it didn't have quite the same status as a drug. I think all these teleclinics and ketamine clinics that now are many of them closing in the States, frankly, I don't think they quite understood that. It's an interesting time.

I'm curious to hear as well, what do you think it is about ketamine as a substance that gives it a higher abuse potential than, say, LSD?

Professor Celia Morgan

I think the duration of action of the effects is one thing. We know that the shorter acting drugs are, the more likely people binge on them. Then also compared to your classic psychedelics, I guess, drugs that work on the 5-HT2A receptor, ketamine has got an anxiolytic, it reduces your anxiety. But those are the drugs that provoke anxiety, too. But Ketamine, because of that dissociative effect, you're separate.

We've done some work showing it's really good for decentering in mindfulness and processes like that, but it does keep you separate in a removed way, which can be if you're struggling, I think that... It doesn't have the challenging aspects as much in that sense. Although the experiences can be challenging, but of the classic psychedelics though, I think that's why it's potentially more dependence forming, both how quick it is and the fact it makes you less anxious and really separated, which can be quite attractive for people, I guess.

Alexander Beiner

Yeah, that makes sense. You mentioned decentering, taking a step back from the content of our experience. In my experience, one of the really interesting aspects of ketamine is its impact on creativity, which I think isn't talked about all that much. But I think a lot of artists and thinkers and people trying to solve problems can have success with that. I certainly have found it very useful for that.

[00:10:23]

On that note, I would like to delve in a little bit into what actually happens in a ketamine session. What kind of therapy is combined when ketamine is used clinically? Is it different to, say, psilocybin and what protocols are you using?

Professor Celia Morgan

I can talk about my own work and then maybe talk more broadly about the field. The stuff that we've done here in the UK, because it's funded by the NHS, pretty much, we've been quite restricted to evidence-based therapies and taking that approach and doing the therapy outside of the actual experience. We're not using it as a psycholytic dose, really. What happens in our trials, people come in, we've used a... Because I work with people with alcohol problems, we're using a mindfulness-based relapse prevention approach. It's got some aspects of decentering.

We do some... I mean, it's a mish-mash with a bit of act. People have suggested acceptance and commitment therapy is a really good fit with ketamine and other psychedelics. We've got some of that work about values. I think, yeah, trying to tap into some of these, using these decentering experiences, they're using the ketamine as a experiential stepping stone towards a mindfulness practice is something we've been trying to do.

What people come in and have their, it's normally like an hour and a half of therapy and then go into their infusion and then come back the next day for another session where there's a bit of integration and space to reflect on the experience. But then we move on to what is quite a manualized therapy. Then in our protocol, they have three infusions of ketamine in total and seven with these quite long sessions of therapy.

It's pretty brief. There's various reasons for that. I think that it's quite unique in that sense because this is trying to fit it within the NHS context. We're working with specific therapists that are trained in CBT. It's probably quite different to what happens in, say, the ketamine clinics in the US. But we have found it to be effective.

That's what we do, but I know there's a whole range of different practices out there. I mean, really, when ketamine emerged as a treatment for depression, it was really given as a standalone treatment, mainly for quite a long time. There were people working, giving people like Phil Wolfson and Raquel Bennett have done quite a lot of work giving ketamine doses in different ways. So giving psycholytic doses and psychedelic doses as well. But yeah, when it recently emerged, it's really been given in psychiatry as a standalone treatment. When you do that, you find that the antidepressant effects wear off after about seven days in most people.

Whereas in our trial, which was the first ketamine-assisted therapy, we found you could see these effects just with three infusions and seven sessions of therapy that were lasting up to six months. I think giving ketamine as a standalone treatment misses a trick in it all because the therapy does... The ketamine can be an experiential stepping stone or something to shift something that's going on in you. But without the therapy, and embedding it in other stuff, then you're missing an opportunity to make it something long-lasting.

I don't know if I've answered your question very well, Ali. But yeah, that's kind of everything.

[00:13:51] Alexander Beiner

You have. Absolutely have. No, it's great. I know there's, of course, people doing ketamine work in the underground. I met someone one time who had done a rebirthing ritual where they were wrapped in cellophane while on ketamine, and then it was slit open and they were reborn. Maybe that'll come to the NHS one day! Evidence-based, yeah.

I'm curious to hear people might be wondering, what are people actually reporting? Someone comes in because they're struggling with their alcohol use. They have the therapy, they have their infusions. What are some of the things that they're saying about where the experience actually led them to changing their behavior?

Professor Celia Morgan

Yeah, it's a really interesting question because it seems really varied. Again, the way that we've set it up, and I guess that's the problem of having clinical trials where we're trying not to prime people too much. But yeah, people go to some places that we don't really take them on the very deep therapeutic process, but people will say, go back to... I was just thinking of a person who went back to confront their dad, who had abused them, and saw themselves from outside of their body with a child self and had a sense of compassion and forgiveness for everyone involved.

A lot of those experiences just seem to come up spontaneously. I don't know if people prime themselves coming into the therapy for those experiences, but a lot of that goes back to revisiting old memories and getting a new perspective on the past, that seems to be something really common.

Then your typical psychedelic experiences, like someone's got their head out of the building flowing in space and these profound more, I guess, just the altered state experiences. But yeah, quite wide-ranging. Then for some people, the effects can be really mild in that sense.

We've tried to do some work. I just don't think we have a really good way of capturing the relationship between those experiences and the therapeutic benefit. We tried to do it with questionnaires, but they're so restrictive, really. In research, it's not really emerged that there's a strong relationship between the acute experiences and the longer term therapeutic benefits, maybe slightly more when people have mystical experiences. But actually, when we do qualitative analysis, it comes out really clearly.

Something that came out of our qualitative analysis that I found interesting, probably because... I mean, it's maybe not surprising, but ketamine is called a dissociative anesthetic, but what people reported were these feelings of immense unity and connection, your typical mystical experiences, I guess. But because it's called dissociative initiative people think of separating off. But I guess when you separate from the self, then you're connecting with something broader.

So yeah, that was something really positive. Then people credited these unity experiences with their transformations and their later reductions in drinking, feeling a sense of connection again. A lot of people have conceptualized things like addiction as a disconnection problem.

So yeah, it's fascinating work. It's always the best bit, is chatting to people about their experiences.

[00:16:59] Alexander Beiner

Well, yeah, Absolutely. I find that fascinating. Also, I'm curious about something you just mentioned on that note, which is the difference between quantitative research and qualitative research. My wife, Ashley, does a lot of qualitative research in the psychedelic world, and I'm always struck by how you really get the essence of the psychedelic experience when you talk to people. Even if they're not people on a clinical trial, just people's experiences that they're sharing online, you get the essence of it.

But most of the data that's in psychedelic trials is quantitative, which I find interesting because having been a healthy volunteer on a trial, a lot of that was me filling out questionnaires about my qualitative experience that was then quantified with other people's, which makes sense, I understand why we do that.

But it'd be interesting to hear your take on the difference between those two ways of gathering information in the psychedelic world and perhaps why the qualitative is not as, I don't know if popular as a right word, but it's certainly not as... It seems less high status if you're doing qualitative than quantitative.

Professor Celia Morgan

I think maybe cynically, I'm pretty sure it's to do with the medicalization of the psychedelics in a way. I mean, in general, I think qualitative is harder to do. It's much more time consuming. It's easier to do quantitative, but also to get medicines licensed, they don't accept qualitative data towards that. You could include it additionally, but all of those outcomes are going to be based on quantitative measures.

I think a lot of the research is being done with a view to getting these medicines licensed in the treatment of mental health conditions or other conditions, and that at the FDA or our MHRA, the EMA in Europe, all use quantitative measures, so I think it comes from that.

But yeah, as a researcher, it's incredibly frustrating. People are having these wild and dramatic experiences, and they're ticking one box on it. Some of my philosophy colleagues just laugh at the idea of a mystical experiences questionnaire, so it's idiosyncratic that you get it down into a questionnaire form, which I've got a lot of sympathy for that. I think doing both, we're doing that in our current trial.

Alexander Beiner

That's great. It is a bit of a wild experience being handed an iPad 30 minutes after a DMT experience, and then they have these scrolling, "0-10, Did you feel your ego dissolve?" And you're like, "Oh, God, I don't know." It's quite interesting.

Professor Celia Morgan

What I find in those is everyone just puts 10. It becomes really dramatic.

[00:19:40] Alexander Beiner

Yes, that's actually true. I did quite a few of those.

You mentioned just there, some of your colleagues who are philosophers, and it seems like a nice segue into talking about the work that's happening at Exeter University here in the UK because you are soon launching a master's program. Maybe you could talk a little bit about that and how that's all come about.

Professor Celia Morgan

Yeah, it's really exciting times. We found it was serendipity. We emerged in a bit of, like a mushroom or something, I suppose. I think quite a few of us at Exeter were working on psychedelics broadly in different ways. My colleague Peter was looking at the philosophy of mind, of psychedelics, and understanding consciousness. I was like a simple psychopharmacologist doing my clinical trials. Others, like my colleague, Christine, were looking at decolonising and using critical theories to understand psychedelic science. Then we've been joined by others, amazing colleagues like Leor Roseman.

We've got a critical mass, I guess, of psychedelics, but with a very transdisciplinary perspective. We started having these seminars, and you've spoken in there, Ali, which I just have enriched my work so much. It's totally changed and shifted things that I thought and understood and practices. We're doing like, ethnography of a clinical trial now, and all sorts of really interesting things. It was just really evident that this transdisciplinary approach to psychedelics is really necessary.

It's such a broad field and it's got implications for so many things. It's just quite an amazing lens with which to unpick all sorts of other practices. It's unweaving the machinery of clinical trials just through this psychedelic lens. To do that, you need a whole load of people with different perspectives. Having benefited from that, we wanted to really share that approach to psychedelics with the world.

We came up with this course, which is the first module that was completed, which was a postgraduate certificate in psychedelics with all different people teaching on it from history, anthropology, philosophy, theology, all sorts. It's been a lot of fun to put together. I think It's such an enjoyable thing to teach. I mean, I don't actually do that much on it at the moment, but we've got clinical perspectives on it.

We just wanted to... I think it was also in a movement, it's really dominated this medical psychologisation of psychedelics. I think it's really important to have something that runs counter to that. We understand the context, because without the context, I think we'll fail to realize all the potential of them. Yeah, that's the thinking behind it.

Now we've been approved with an online master's and then starting an in-person master's next year. Yeah, really exciting times. I think it's the first program like that in the world, which was a great thing to have in Exeter. Yeah, hopefully you'll come and teach on it at some point.

[00:22:46] Alexander Beiner

Yes, I would love to. I met some of the students, actually, because we did a one-day Breaking Convention event a few days ago that you spoke at as well, along with some of your colleagues. In the front row were the students from the PGCert who'd all made T-shirts, really sweet, very good T-shirts, actually. I wanted one. That was really nice. I guess because they've been online, and then this is a chance for everyone to meet in person. The vibe was really strong. It was really nice.

Professor Celia Morgan

People thought I paid them.

Alexander Beiner

That hasn't been disproven yet.

What's the response been like from, I don't know, academic colleagues who perhaps aren't into psychedelics or universities obviously well on board, it would seem. It's happening. But 10-15 years ago, doing a master's like this would have been very difficult or not impossible. How have you noticed the academic appetite changing?

Professor Celia Morgan

Yeah, it's interesting. I guess it's just a function of the general mainstreaming of psychedelics, people are much more enthusiastic. Other colleagues come along to our seminars, people who do research on animal behavior, just out of a general broad interest, I think something about it captures the imagination of people. Because it's just a really interesting rebrand that psychedelics have had from these things. One of our colleagues was saying they were things you took that made you mad, and now they're things that make you sane. It's just this huge shift.

We work in a psychology department, so there's a lot of interest there. Psychiatry, I think it's the thing to save them because there's not been a lot of treatments that have been very successful there. So yeah, there's a lot of interest from that medical side. But more broadly, yeah, I think because of the huge media interest, I think that's both a positive thing and a negative thing as well. But yeah, it's been mind-blowing for someone, I've been working in this field for, I guess, 25 years.

I might publish my first paper on ketamine in free parties in 2000. And yet to see the change is pretty extraordinary to where people were before were like, "Why are you doing that? That's really weird." But again, now that's come with problems, but I think that's why it's great having things like Breaking Convention that really contextualize psychedelics, and hopefully we can do that with our course as well.

Alexander Beiner

Yeah, definitely. It's really exciting what you guys are doing. Of course, Breaking Convention happens at Exeter, so there's a hub happening there, which is great.

[00:25:18]

Last thing I wanted to ask you about is your hopes for the future of psychedelics. What areas of research are you particularly excited about? Where would you like to see the field move in the next, say, 5-10 years?

Professor Celia Morgan

Yeah. Well, I think things I'm excited about in the near term, and I was speaking to your wife about this, actually, the potential of group treatments. We've just hopefully got some funding to run some group therapy sessions with psychedelics. This is, again, in a more of an NHS setting. But I think harnessing that approach and being informed by wisdom from not just medical mainstream, so underground practitioners, also indigenous cultures is something.

Because it seems like taking psychedelics on your own in this way that we have been doing in clinical trials, giving them individually, it definitely has its space. But actually a group treatment setting could be much more... We have these problems of access, we have problems of connection and integration and actually holding all those experiences within a group as they are done in the underground or in indigenous cultures just seems more natural. If we can think of a way to do that within medical settings, I think that's got a promise.

Also, yes, I guess I'd like more broadly a grander goal would be to see some weaving together of all these different approaches. It's something people are speaking about Breaking Convention, but creating communities of practice to be able to hold all the wisdom that is already out there and ones that don't necessarily privilege one type of knowledge over another so that we can incorporate all of the different wisdoms that are out there. Because maybe moving away from this dominance of the medical model in the psychedelic space, I think would be great.

I've got loads more hopes, but those are just a few.

Alexander Beiner

Yeah, no, I share a lot of those, and it's interesting. A few people ask most guests this question at the end, and a broadening out is quite a common theme that's emerging, a broadening out from just a particular tight medicalized model, as useful as that model is in many ways, and into different areas. It's always fascinating to hear everyone's different take on that. Then also the importance of group work is something that I think I definitely agree with.

Celia, thank you very much for this. It's been a pleasure.

Professor Celia Morgan

Thanks, Ali. Thanks for having me.