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The New Era of Autism Treatment?

As a “psychedelic renaissance” continues to sweep through the clinical world, are new announcements to treat autism using psilocybin welcomed? Or is this an age-old case of drug companies exploiting Neurodiversity in order to market new products?

By Kate Graham-Shaw

Stumbling through an ethereal forest, light sparkling over his eyes and fallen leaves crackling beneath his feet, Aaron Orsini came across an individual. But this was no ordinary individual - instead of their features being clear and discernable, the person was more like an entity, a fiery ball of energy and emotion which glowed like a supernova.

But Orsini was not afraid - on the contrary, as he came to a stop a few feet away from them, an immediate sense of connection spread over him. For so many years, Orsini had struggled with human interaction, had failed miserably at recognizing other people’s emotions and had found it hard to speak with people in what is considered a “natural” manner. But all this fear and anxiety about being sociable disappeared as soon as he stood in front of this glowing ball of energy. Instead, he discovered that he could sense the individual’s emotions as if it were the temperature of a room - it was real-time, sensory detection. He felt pulses through the air indicating when the individual was happy, he felt undercurrents flowing to him to indicate the individual was sad. He was deeply and organically connected to this individual - he knew what they were thinking, he knew what they were feeling. The neural pathways in his brain were becoming rewired, rerouted to see the world he had thought he knew in a whole different light.

A few hours later, he will groggily blink out of this trip as the psychedelic drug leaves his system.

Diagnosed with Autism Spectrum Disorder at 23, Orsini experienced a “cascade of events” which led him to try these psychedelics at 27. The effect was profound. “I realized that everyone experiences the world differently from each other,” he says. “It considerably expanded my awareness.”

Orsini is not the only person to have seen potential benefits in using psychedelics to treat mental health conditions. Clinical trials involving these types of drugs have been increasing over the years, and have been showing promising results with a number of conditions, including depression, PTSD and anxiety disorders. Early last month, Canadian pharmaceutical company Nova Mentis Life Science Corp. announced that it was joining with US-based company Mycrodose Therapeutics with the intention of beginning phase 2 clinical trials to treat neuroinflammatory disorders with psychedelics - including Autism Spectrum Disorder (ASD) - “as soon as possible”.

The companies have also recently received orphan drug designation for psilocybin from the FDA and the European Medicines Agency, which is a designation given to compounds with the potential to treat rare and genetic conditions without other solutions. It gives the company the opportunity to waive fees and fast-track drug development.

“I chose Autism Spectrum Disorder for Nova Mentis because it is an unmet medical need,” said Marvin Hausman, Nova Mentis’ Chief Medical Officer, in an interview with Proactive News. “If I can leave a legacy for this devastating disease that would prove worthwhile for me.”

According to the CDC, ASD can be defined as a developmental disability that can cause significant social, communicational and behavioral challenges. The term “autism” was first coined in 1911 by Swiss psychiatrist Paul Eugen Bleuler for a group of symptoms he thought exhibited a version of “childhood schizophrenia”. Since then, the term has morphed and developed over the years, at one point splitting up and including the term Asperger’s Syndrome for “high-functioning” autistics, before the symptoms being finally recognized by the DSM under the umbrella term of Autism Spectrum Disorder. Individuals often have difficulty communicating with others in a natural way, such as Orsini did, and tend to find it more difficult to figure out what other people are feeling. Individuals with ASD are considered to be on a “spectrum”, meaning that some people are more severely affected by symptoms than others..

“With autism, people struggle reading social cues and are closed off from empathy,” says Manesh Girn, a researcher in neuroscience at McGill University in Montreal, and founder of the informational YouTube channel the Psychedelic Scientist, which gives in-depth analyses of how psychedelics work on the brain. “On the social side, psychedelics make you feel more connected to people, and feel less of a boundary between yourself and others. Studies have shown that people on LSD - which has a very similar effect on the brain as psilocybin - feel a lot more emotional empathy.”

Psychedelics are thought to do this by working on specific pathways in the brain known as the serotonin 2A receptors. Drugs such as LSD and psilocybin have a chemical structure similar to serotonin - a key hormone which stabilizes mood and gives people a feeling of happiness.

“Psychedelics also make your mind and brain very flexible,” continues Girn. “This allows people to explore new ways of thinking about things which could help people with ASD who often find it difficult to process change.”

After taking psychedelics, Orsini’s life changed. “It was mind-blowing to be like ‘look at all this amazing light and sound and the magical natural world,’” he says. “But the simple magic of connecting with a human being... there was nothing to compare that to.” He suddenly felt like he could understand and process other people in a way he hadn’t been able to before, and he slowly began getting his life back on track.

After years of feeling the benefits, Orsini decided to chart his experience with psychedelics in a book named *Autism on Acid*, which was published in 2019. “LSD was a turnkey in my life,” he

writes in the second chapter. “It simultaneously saved my life while at the same time imbuing it with a sense of meaning, connection and accessibility. And it was thrilling.”

He went on to create a website of the same name, AutismOnAcid.com, and, together with Justine Lee, a graduate pharmacology student at the University of California, co-founded an online group called the Autistic Psychedelic Community.

“We were really just looking to bring together a neurodivergent community and foster conversation,” he says. The group has been hosting weekly Zoom meetings throughout the pandemic to bring people who have had similar experiences with psychedelics together, and typically hosts around 15-50 people every session, where they talk about the potential psychedelics have to help people with autism.

But is all this optimism and the announcement of new trials by Nova Mentis to potentially treat ASD actually a good thing?

In a gray psychiatrist’s office, which stunk of a peculiar mix of coffee and disinfectant, Karen Lean sat waiting.

Little did she know that she was about to receive a diagnosis which would change her life forever.

“It felt relieving,” she says, recalling the moment that her psychiatrist told her she had ASD more than a decade later. “I could finally start to make sense of my life.”

Nowadays, Lean works in Healthcare IT, supporting a large system used by radiologists in Boston. On top of that she has also become the secretary of the Autism Association of New England (AANE), a support group initially formed in the late nineties for people and relatives of people with Asperger’s Syndrome diagnoses. The group adapted to include all ASD diagnoses when Asperger’s Syndrome was dropped from the DSM-5 in 2013.

“I’ve had the diagnosis for about 12 years, and I think the biggest gift it has given me is awareness and acceptance...Maybe there are just things that are really challenging for me and I can accommodate for them, or just ask people to be understanding about them.”

Her thoughts on the role of psilocybin in helping treat autism differ to those in the Autistic Psychedelic Community.

“I suppose I have mixed feelings,” she wrote to me in an email after our interview. “Insofar as these substances have shown promise for PTSD, I think it’s probably helpful in similar ways for autistic people because many of us have PTSD. But I don’t get the sense that’s the angle this company [Nova Mentis] is coming at, in particular when I see the term “neuroinflammatory condition” it flags for me that they’re using an explanatory model of autism that I’m not sure is correct.”

As Lean says, there is a lack of scientific evidence that neuroinflammation plays a direct role in the pathogenesis of autism in humans - the cause of autism is currently posited to involve a combination of genetic and environmental factors. Despite this, Nova Mentis are insisting that ASD is a “neuroinflammatory” condition.

“I also think some autistic people don’t have a ‘problem’ with empathy in the sense that we lack it, but rather that we are overwhelmed by the emotions of others.” Lean continues. “I think a lot of typical and medical models of autism kind of have the ‘problem’ backwards.”

The question of whether autism is actually a ‘problem’ condition that we should aim to solve has received much debate in recent years. The rise of the neurodiversity movement - a viewpoint which says that brain differences (such as those in people with ASD) are normal rather than a deficit, and that actually the ‘neurotypical world’ should become more accommodative of neurodiverse people - has gained a lot of traction.

Alys W. was diagnosed with autism at 18. She now writes a blog on neurodiversity and also runs the instagram profile “alys_neurodiversity” where she posts about the issue and her journey after diagnosis for almost 2000 followers.

“Honestly, as someone who is diagnosed, autism is as much a part of me as needing air,” she says, when asked about her thoughts on the new psilocybin trials. “You can’t treat it, I just see things differently.

“I think this trial is worrying because it shows people don’t understand autism, neurodiversity and its causes, and that they don’t accept us. It’s more like they’re just acting out of fear and basing their fears on stereotypes, like Sheldon from the Big Bang Theory, but in reality we’re all different. We need to talk about it instead, and not use stereotypes to frame us on social media and TV - we’re just the same as everyone else, but we sometimes might just see things differently.”

In addition to this, Lean also exercises caution about whether everyone’s experience with these types of drugs will be as positive as Orsini’s and people in the Autistic Psychedelic Community.

“Could it be that some autistics will benefit from psychedelics and others will be harmed by them?” she says.

It is important to remember that, while cities across the US have been moving to decriminalize psilocybin in a “psychedelic renaissance,” including Denver, Washington DC and Santa Cruz, and the fact that in 2020 Oregon became the first US state to legalize psilocybin for therapeutic uses, psychedelics are still considered as “harmful substances” in most of the world. Having a bad trip on a psychedelic has the potential to cause serious psychological harm, including a distortion of one’s senses and identity, depression and severe psychosis.

Speaking to me over Zoom from a blank-walled home office, a moody winter's sky seen through the window beyond, it is clear how much Orsini thinks psychedelics have benefitted him.

"It turned my life around," he says with palpable emotional energy. "I went from feeling suicidal to feeling like not only could I live, but that I could also enjoy living."

But, as psychedelics continue their renaissance and redefinition as clinical drugs, it seems inevitable that the strong debate about whether autism can be effectively treated this way will continue. Orsini accepts that psychedelics might not be the answer for everyone with autism.

"For me, it was a catalyst for psychological insights," he says. "I felt like psychedelics got me to where I am in life...But it's like fire; fire can burn and fire can keep you warm, it's all about how you utilize it."

When asked if he was in support of Nova Mentis's trial and what he thought about neurodiversity, he hesitated a little.

"Our community is in no way affiliated with these drug companies," he wanted to stress. "But I feel like we have created a safe space for people to talk about the issue. And I am glad that these drugs are finally being taken seriously in a clinical setting."

He paused slightly and glanced through the window on his right, taking in the cloudy sky.

"But there is no magic bullet," Orsini continued with a sigh. "I understand that, in the end, psychedelics might only really help some people with autism and may be harmful for others. And I get what the neurodiversity movement is saying, but I think these treatments really just aim to alleviate symptoms which autistic people struggle with, not "cure" us - it'll hopefully just make life easier for some people. But, then again, there is still just no magic bullet for autism, all people who are diagnosed have to go through a process of self-acceptance to some extent and have to learn to live with who they are."

If trials go ahead unencumbered, it is possible that psilocybin could be cleared for therapeutic use in humans as early as 2023. Nova Mentis and Orsini seem optimistic, but it'll be interesting to see how this debate develops, especially as the possibility of treating autistic children with psilocybin has already been raised by Marvin Hausman. Only time will truly tell whether psilocybin passes all of the tests, both clinical, and the acceptance tests posed by the autistic community at large. ■