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NUNM student leads Ayahuasca pilot study on depression

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ND-MSCR researcher Payton Follestad tracks neurological and epigenetic shifts to examine effects of psychedelics in the body.



Payton Follestad had a clear goal in mind when she emailed the National University of Natural Medicine (NUNM) to confirm she could do research on psychedelics as a student.

Fascinated by psychedelics, specifically Ayahuasca, Follestad chose to pursue a dual degree in the [Doctor of Naturopathic Medicine](#) and [Master of Science in Clinical Research](#) programs at NUNM.

In 2024, after years of dedicating herself to research on psychedelics, she finalized her abstract entitled “Ayahuasca Observational Pilot Study: Effects on Depression, Connectedness, Epigenetics and Microbiome.”

In this first student-led [study at NUNM](#) on Ayahuasca, a psychoactive plant used traditionally for ceremonial practices in South American Indigenous communities, Follestad plans to study the potential benefits it may have for treating depression and other mental health challenges.

Follestad said depression continues to be a prevalent condition despite new therapeutic and pharmaceutical treatment options being made available.

“It’s startling to see that rates continue to rise,” said Follestad, who earned her bachelor’s degree in biology, society and environment from the University of Minnesota Twin Cities. “If we’re coming up with such great new treatments for depression, why are we not seeing a decrease?”

Her study, which she runs in collaboration with mentors at the [Helfgott Research Institute](#), aims to explore how Ayahuasca can affect various systems of the body.

The research team aims to collect qualitative survey data and biological samples from at least 20 respondents to track neurological, epigenetic, inflammatory, and microbiome changes that happen throughout the study.

The study works with psychedelic facilitators to recruit participants from those attending their sessions and individuals who are interested opt into the study to provide pre and post ceremony data through surveys and testing.

Researchers will also work with external partners to conduct an initial and follow-up round of diagnostic testing on participants’ gut microbiome and epigenetic samples.

These tests, which are confidential and to be shared with respondents free of cost, seek to gauge any shifts that occur in participants acutely after their experience, as well as over the following three-month period.

“Psychedelics have a propensity to increase plasticity, which could be one of the contributing factors for how it works as an antidepressant therapy,” she said. “With epigenetics, we’re also looking at how long these factors stay and if this is a reason why it’s more sustainable than other therapeutic approaches on the market today.”

Follestad said symptoms of depression can often develop suddenly or have overlapping causes, presenting a challenge for physicians to identify their origin.

“In the context of natural medicine, and depression in particular, the root cause can be so many things,” said Follestad, now a fourth-year student at NUNM. “This makes it difficult to target.”

One data point of the study will be to measure gut health, she said, as having more beneficial bacteria and balance in the gut promotes serotonin production which can regulate mood and create an overall sense of wellbeing.

In March, Follestad will be presenting the study at the 2025 International Congress on Integrative Medicine & Health conference as part of “Leaders & Learners, Advancing Whole Health Together”, which celebrates global practitioners taking innovative approaches to research and healthcare.

Roots of Psychedelic Study

Follestad said she became interested in Ayahuasca after experiencing her own struggles with depression and began to search for alternatives outside traditional pharmaceutical treatment.

“Antidepressants kind of made me comfortable enough to not change anything,” she said, “when not making a change was actually what the problem was.”

Ayahuasca is particularly interesting for its longstanding cultural use as an ancient therapy to expand awareness, Follestad said, and preliminary research has led her to consider whether its power may come from a capacity to act on multiple bodily systems.

“What’s really compelling to me is the sustainability of psychedelics to approach so many factors in a multifactorial condition,” she said. “We don’t know exactly what it is about Ayahuasca that makes it so dynamic with this condition.”

To get the best results from the study, Follestad wanted to track Ayahuasca experiences that mirrored indigenous practices, assessing intention setting and diet preparation such as fasting prior to a ceremony.

The study methodology also included respondent feedback on positive psychological outcomes of the experience, which she said could influence depression markers in an individual and their overall quality of life.

She based part of the qualitative post-survey on the Watts Connectedness Scale, which measures participants’ experience of inner and outward connection to self and nature.

“You’re not just reducing depression scores, but you’re actually enhancing something else,” she said. “Sometimes depression can be like ‘anti-connection’ and it’s kind of a unique thing about psychedelics that they can enhance this connectedness.”

Follestad said while the pilot study is specific to Ayahuasca, it can hopefully have ripple effects to open inquiry into how other psychedelics may function in similar ways and lead to more research opportunities within the field.

“It’s almost as if it’s a detox thing—a connection with mind, body, spirit—a connection with community and an opportunity to make change,” she said. “I think the epitome of holistic health is in creating that kind of opportunity for people.”

Editor’s Note: Learn more about the [research study](#) and how to get involved through [Helfgott Research Institute](#).

Written by Ashley Villarreal, Marketing Content Specialist