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ANYA SOSTEK JUN 21, 2025 4:00 AM Pittsburgh Post-Gazette asostek@post-gazette.com



Corinne Hazel had been working in a microbiology lab at West Virginia University for most of her freshman year when, in April leftover morning glory seed pods.

2023, she asked her professor what she should do with some



tiny bit of fuzz growing inside. As Panaccione, professor of plant and soil sciences at WVU, has learned over the years, sometimes fuzz is meaningful — and sometimes it's just dust.



They got official confirmation nearly a year later that the fuzz was a long-sought-after fungus — with possible medical benefits. Scientists had hunted the fungus for decades. That included

To investigate, he asked Hazel to scrape it out and culture it.

Daniel Panaccione looked at the seeds and thought he spotted a

byproducts from a similar fungus. "I was thrilled," Panaccione said. "You're always excited at the possibility, but then you have to hold back from letting yourself

believe it, because you don't want to be heartbroken later."

Albert Hofmann, who invented LSD in the 1930s by modifying

In April — about two years after they first spotted the fungus — Panaccione and Hazel published their findings in Mycologia, a

the lead.

prestigious scientific journal that takes only about one in five submissions. When it came time to write the research paper, Hazel, now a 21-

paper than previous students have had," Panaccione said. "She really insisted on that. And she was great at it."

The new species needed a new

name, and after posting some

possibilities in the hallway and

letting passersby vote, they decided

on Periglandula clandestina — a nod

year-old rising senior at WVU, took

"She had a much more significant

role in the actual writing of the

to its clandestine nature, hiding for so many years. Making the connection Hazel, an environmental microbiology major from Delaware, Ohio, connected with Panaccione through WVU's Research Apprenticeship Program, which is open to all undergraduates. Panaccione hadn't worked with morning glories for several years,

interested in plants and nature.

family of chemicals produced by fungi.

observation and evidence collection.

seed pods in April 2023.

fuzz wasn't dust.

analysis.

but suggested Hazel research them after learning she was

Panaccione's research has long focused on ergot alkaloids, a

So Hazel began a research project studying evidence of ergot

a 3D printer that separated the roots and allowed for better

But that project went on hold after they spotted the fuzz in the

After they looked under the microscope, it was pretty obvious the

"We had to figure out, is this just some random fungus, or is it

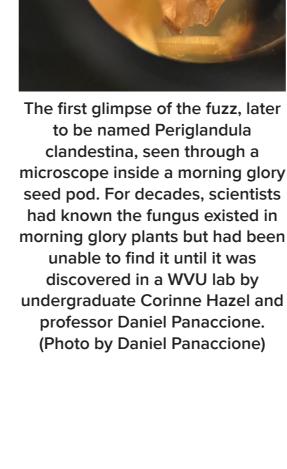
To solve the mystery, she put some of the fungus on a petri dish

fungus in a solution to extract the DNA and sent it off for a quick

and fed it malt extract to grow it. She put other parts of the

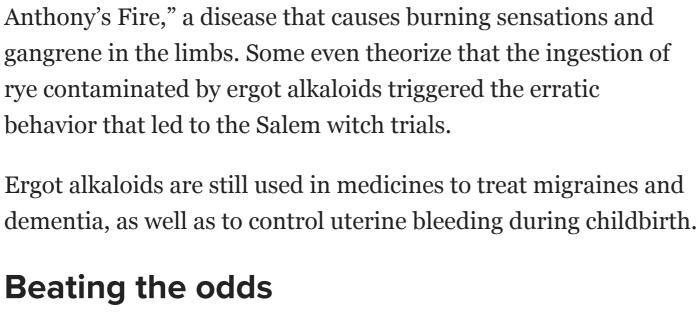
what we've been looking for?" Hazel said.

alkaloids in morning glory roots. She invented a new device with



Panaccione immediately wondered if it might be the fungus scientists had been searching for inside morning glories. The plants — common in backyards — were known to produce ergot alkaloids, and ergot alkaloids came from a fungus. But nobody had figured out where the fungus was hiding.

Corinne Hazel, an environmental microbiology major at WVU, looks through a magnifying glass at a culture of the fungus that she discovered growing in a morning glory seed. (Justin Guido/Post-Gazette)



"We had a lot of hints along the way that we were right," she said. "Each time we got a little hint, it made me more motivated to get into the lab and do more work."

"I was sure this was going to be it," Panaccione said. "But

have enough data."

already against them.

Keeping at it

alkaloids.

lab.

emotionally, you don't let yourself get attached to it until you

While they waited for the results, Hazel hunkered down in the

She is working in the lab at WVU for the summer, in part to finish up the initial research project she started before discovering the fungus. After graduation, she hopes to pursue a graduate degree in environmental microbiology.

Hazel estimated that she has spent about 10 to 15 hours per week

in the lab during her undergraduate years, likely putting her

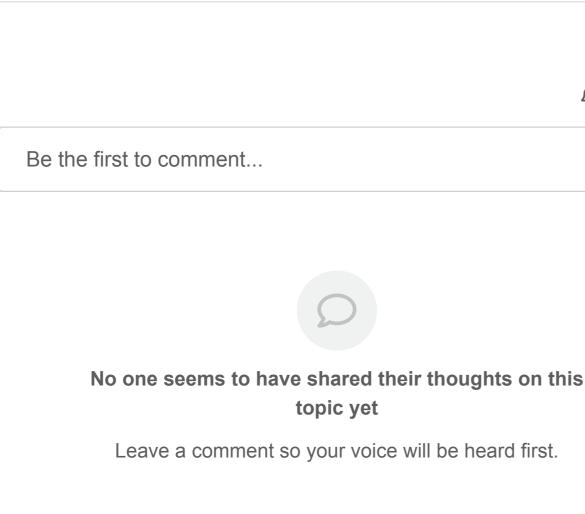
around 2,000 hours studying morning glories and ergot

University graduate, she previously worked as a business, education, news and features reporter. asostek@post-gazette.com

Anya Sostek is a Post-Gazette health reporter who

has been with the organization since 2004. A Duke

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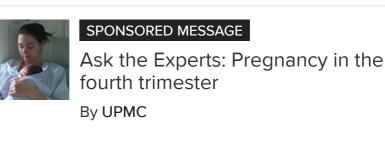
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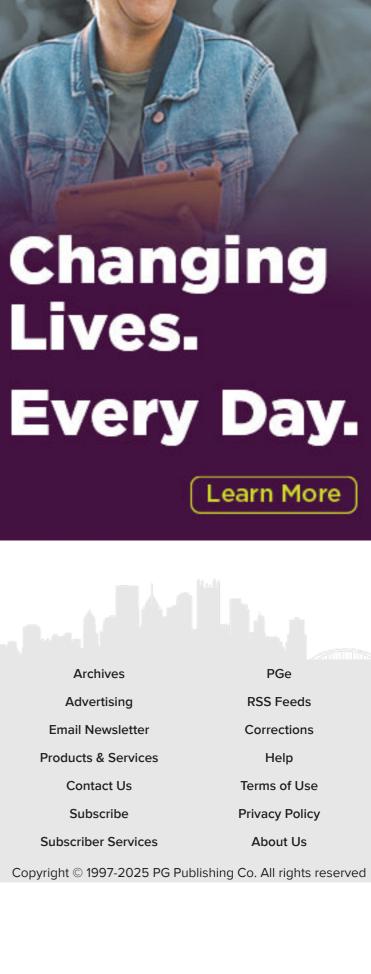
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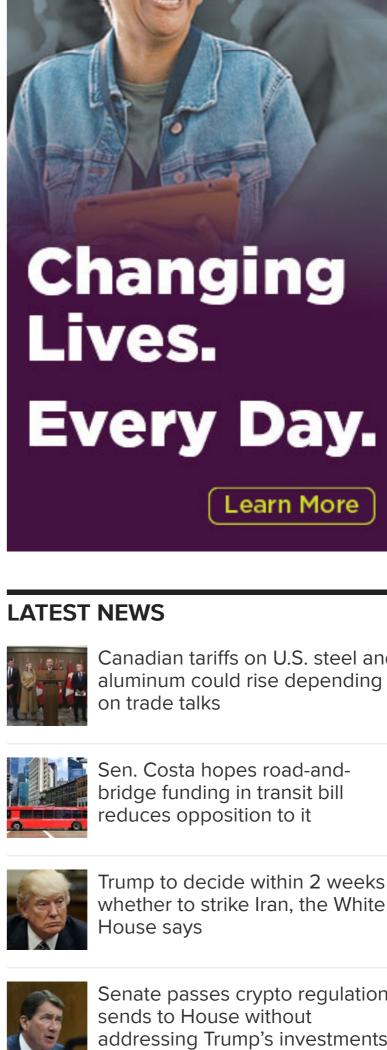
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The results that came back the next day were promising for them: It was related to the genus Periglandula, a group of fungi known to produce ergot alkaloids. Ergot alkaloids have been known to have medicinal and harmful properties dating to the Middle Ages, when they were used to induce labor and stop maternal bleeding. Ergot poisoning, caused by eating rye contaminated with a fungus that produced ergot alkaloids, was responsible for "St. Finding out exactly what the fungus was required more testing. Hazel secured a \$1,000 student enhancement grant from WVU that covered the cost of having the entire genome sequenced. About a year after the first sighting of the fuzz, the genome sequencing showed the result they were hoping for: a new species.

One experiment made them realize how fortunate they were in making their discovery. When she analyzed 39 seed pods in that experiment, Hazel found only about one-third of them even had the fungus present meaning the odds of spotting the fungus in the first place were

As part of their research, Panaccione and Hazel found that most of the fungus is concentrated in the lower stem of the plant. Panaccione believes that ultimately, the new strain of fungus may

produce a high yield of ergot alkaloids, which may make it useful

"It's just an important discovery for pharmaceutical potential,

inventor of LSD," Panaccione said. "But it's phenomenal that

and historically, the connection with Albert Hofmann, the

someone who is an undergraduate can execute all of this."

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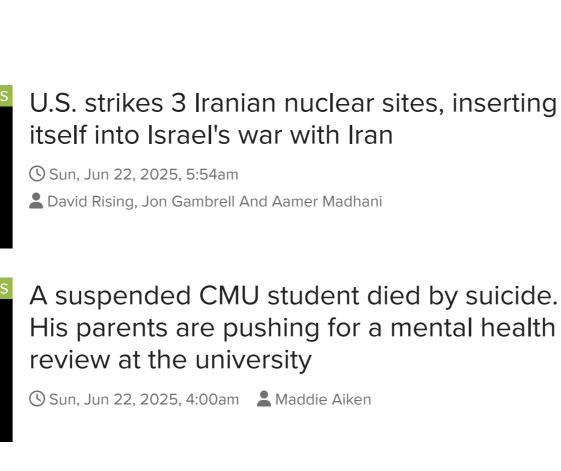
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