

# Coronavirus News

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### University of Miami serving as pilot study site for new, rapid coronavirus breathalyzer test

28-Oct-2020 11:40 AM EDT, by [University of Miami Health System, Miller School of Medicine](#)

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University of Miami

*A University of Miami student blows into a COVID-19 breath analyzer to test for the virus.*

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**Newswise** — Imagine blowing a few breaths into a small tube, placing the tube into a COVID-19 scanner and finding out if you are clear from the novel coronavirus within minutes.

By participating in a short clinical research study that begins this week, the University of Miami is poised to help make that possibility a reality. The University readily agreed to become the first college testing site for a quick, easy, and cost-effective Israeli-produced COVID-19 Breath Analyzer that could revolutionize coronavirus testing if approved by the U.S. Food and Drug Administration (FDA).

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#### SECTION

“It’s as simple as a kazoo—you just blow into it. And if it works, it will be a game changer,” said Roy E. Weiss, chair of the Miller School of Medicine Department of Medicine and chief medical officer for COVID-19. “It would allow us to test at a fraction of the cost and time of our current nasal swab test and as frequently and wherever necessary. There could even be stations before a football game. People would blow into the tube, get their results in a minute, and then if they’re negative, go in and enjoy the game.”

Starting this week at the Coral Gables Campus, upper class residential students who go to the Pavia Garage for their mandatory, regularly scheduled nasal swab test will be asked if they would also be willing to provide a breath sample. Faculty and staff members who are randomly tested in the next few weeks will also be offered the opportunity to participate. The same testing is being offered to faculty and staff members at the Medical Campus. Those who participate will have to sign a consent form. The University aims to provide about 1,000 test results to BioSafety Technologies, a subsidiary of Israel-based TeraGroup, the breath test developers who are gathering data from the University and other pilot sites across the globe. The technology is now in the evaluation process for FDA approval.

“What we are trying to do is help validate the test by comparing it to the gold standard for COVID-19 detection, which remains PCR [polymerase chain reaction] via nasal swab or saliva,” said Erin Kobetz, vice provost for research and scholarship, who is also leading the University’s testing strategy. “It’s too soon to draw any conclusions about the effectiveness of the breath test, but we are hopeful. Research can fill the gap in understanding and keep the U on the forefront of innovation.”

University administrators are interested to see whether the breath analyzer will gain emergency use authorization—a way the FDA has fast tracked many treatments to combat the spread of COVID-19.

“This is probably one of the first studies in the United States to evaluate the use of breath tests to detect COVID-19,” Kobetz said. “If approved, this test could provide the opportunity to assess risk in real time, which may help us more effectively curb transmission.”

In the meantime, the University is also exploring the possibility of integrating the saliva test into its mandatory COVID-19 testing regimen. Recently, residential students from Lakeside Village and Eaton Residential College had the opportunity to provide a saliva swab along with their normal nasal swab—both of which use the PCR technique, the most reliable tests that detect genetic material of the virus.

“We are trying to determine whether a saliva-based test will enhance our capacity to screen at greater frequency or in larger numbers,” Kobetz added.

The COVID-19 Breath Analyzer works similarly to the Breathalyzer devices that police use roadside to take a reading of the alcohol content in the blood of suspected drunk drivers. But instead of using one device for drivers to breathe into that also measures blood alcohol content, the COVID-19 Breath Analyzer includes two steps, said Netta Ness, senior vice president of TeraGroup. First, participants provide a sample by breathing a few puffs into a disposable, sterile TeraTube. The sample is then sealed and fed into a BioSafety station, which is a freestanding scanner that can detect the presence of COVID-19.

“Your breath is not dry,” Weiss explained. “It contains moisture, and that moisture contains droplets. And if you have COVID, the virus will be in those droplets.”

TeraGroup is hopeful that once the University and other global partners help them gather more data through these pilot studies, the company will be able to sell their test in the United States. The breath tests will cost no more than a cup of coffee, and the BioSafety station can get results from a single test in one minute, Ness added.

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