

Sham Nambulli shows Secretary Blinken how he handles samples of the novel coronavirus within a biocontainment laboratory bay.



AMIEE OHIOZINSKI/UNIVERSITY OF PITTSBURGH

The Place for Pandemic Preparedness

“Mr. Secretary, have a look at this highly infectious microbe.”

On a Sept. 30, 2021, visit to the University of Pittsburgh Center for Vaccine Research (CVR), Secretary of State Antony Blinken learned how scientists here are contributing to the fight against COVID-19.

Blinken, in Pittsburgh to attend the inaugural Trade and Technology Council meetings with the European Union, met with Chancellor Patrick Gallagher and Anantha Shekhar, senior vice chancellor for the health sciences and John and Gertrude Petersen Dean, School of Medicine.

So, what research was the secretary privy to during his visit?

Amy Hartman, associate professor of infectious diseases and microbiology, showed him the cause of the COVID-19 pandemic in microscopic detail.

Under the lens was a slide of SARS-CoV-2-infected cells. The image also encapsulated the major research focus of CVR for the past two years.

CVR was one of the first facilities in the United States to receive samples of the novel coronavirus; Pitt researchers and their collaborators worldwide have since made significant contributions toward understanding the virus’s biology and developing promising treatments.

“If we’ve learned anything during the last 18 months, it’s that we can’t ignore the threat of emerging infectious diseases,” Gallagher said. “The University of Pittsburgh’s Center for Vaccine Research is uniquely positioned to tackle this challenge, and it complements a deep bench of talented Pitt scientists, clinicians and scholars that is pushing the frontiers of this research forward every day.”

The image of SARS-CoV-2-infected cells Blinken saw was created by

Sham Nambulli, research scientist and member of Jonas Salk Professor of Vaccine Research and CVR Director Paul Duprex’s lab. Nambulli is part of the team that genetically engineered the measles vaccine to act as a potential vaccine for coronavirus. The group collaborated with Yi Shi, then a Pitt assistant professor of cell biology, to develop “nanobodies,” cloned from a llama, that could become inhalable drugs to treat and prevent COVID-19 infection.

Matthew Neal, Roberta G. Simmons Associate Professor of Surgery, briefed Blinken regarding how Pitt and its clinical partner, UPMC, work in tandem with medical centers throughout the world to pinpoint effective treatments for COVID-19—at an unprecedented pace. Clinical trials that are adaptive, that learn and adjust as they go, are yielding life-saving insights.

After his tour, Blinken tweeted, “Biomedical research is key to protecting public health, including reducing the risk of future pandemics. Thank you to the team at @PittTweet Biomedical Research Facility for saving lives and improving American health security.”

CVR was a popular stop this fall. Sen. Bob Casey, a champion of biosafety lab funding, visited in October to learn about what it takes to tackle emerging infectious disease threats.

“It’s hard to get across what we do sometimes,” said Natasha Tilston-Lunel, postdoctoral associate working with Duprex. “Having visibility for this work is so important.” —*Staff reports*



Blinken