

February 4: Novel ACE2 Variant Neutralizes SARS-CoV-2 Virus, NMH Testing Site Relocates This Weekend Only, NM Supports National #MaskUp Campaign

*Today's issue features information about a recently published study that involves using an ACE2 variant to neutralize the SARS-CoV-2 infection in the human kidneys from NM Nephrologist **Daniel Batlle, MD**. It also includes details about the temporary weather-related relocation of the NMH drive-thru and walk-up COVID-19 testing site, and the national #MaskUp campaign.*

NOVEL ACE2 VARIANT NEUTRALIZES SARS-COV-2 INFECTION IN MINIATURE KIDNEYS

Early in 2020, it was recognized that angiotensin converting enzyme 2 (ACE2) is the main receptor for the SARS-CoV-2 virus that causes COVID-19, and a team of NM scientists that has been working with ACE2 for many years proposed the use of soluble ACE2 protein as a way to intercept the SARS-CoV-2 S spike from binding to the full-length membrane-bound ACE2 receptor.

This NM team, led by Nephrologist Daniel Batlle, MD, has now shown that human kidney organoids can be infected by SARS-CoV-2, as they possess the human full-length ACE2 receptor and transmembrane serine protease 2, both of which are needed for infectivity. Using this model, the team demonstrated that a novel soluble ACE2 variant that they bioengineered and modified to be of extended duration of action can inhibit SARS-CoV-2 infection, suggesting its potential use as a preventive and therapeutic.

The study, titled **A Novel Soluble ACE2 Variant With Prolonged Duration of Action Neutralizes SARS-CoV-2 Infection in Human Kidney Organoids**, was published in the February 1 issue of the *Journal of the American Society of Nephrology*.

NMH DRIVE-THRU AND WALK-UP TESTING SITE RELOCATES DUE TO WEATHER

On Saturday and Sunday, February 6 and 7, COVID-19 testing at the drive-thru and walk-up site at Lavin Family Pavilion will be relocated indoors because of the forecasted extreme cold. Drive-thru patients will be directed to park on the eighth floor of the Lavin garage and proceed to the 17th floor for testing. Walk-up patients will be directed to the 17th floor. Additional details will be provided to patients as needed.

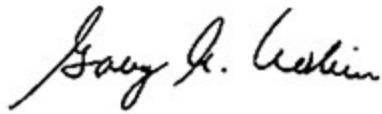
NATIONAL #MASKUP CAMPAIGN

Northwestern Medicine has joined more than 100 of the nation's leading health systems, representing thousands of hospitals in communities across the U.S., with an urgent plea for everyone in the U.S. to #MaskUp. The Centers for Disease Control and Prevention points to recent studies that demonstrate face masks successfully limit the spread of the virus that causes COVID-

19, protecting the wearer and those standing nearby from inhaling harmful pathogens. Even for those who have been vaccinated against SARS-CoV-2, wearing a face mask remains important to slow the spread.

A public service message is now running in several national media outlets. Northwestern Medicine is uniting with other local health systems to share the message regionally. To learn more, visit the campaign website at [everymaskup.com](https://www.everymaskup.com).

Please continue to remind your patients and colleagues regarding the importance of wearing a mask to prevent the spread of COVID-19. Thank you for your continued commitment to our *Patients First* mission and active participation in the NM vaccination program.



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