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Østfold University College

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WASH YOUR HANDS! THE MUTANT BAT VIRUS IS HERE!

Detection & identification of SARS-CoV-2 variants

at Østfold Hospital & Oslo University Hospital

DOAA AL-FAHAD
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Biomedical laboratory scientists

VIRUS VARIANTS THREATEN TO TAKE OVER THE WORLD

Mutant variants of SARS-CoV-2 have emerged and are solidifying its iron grip across the nation. For each day that passes, its malevolent presence grows stronger.

These so-called Variants of Concern exhibit an increase in transmissibility and are becoming the dominant source of infection.

The World Health Organization have recently assigned labels for these variants, using letters of the Greek alphabet, to simplify public communications and avoid stigmatizing the countries they originated from.

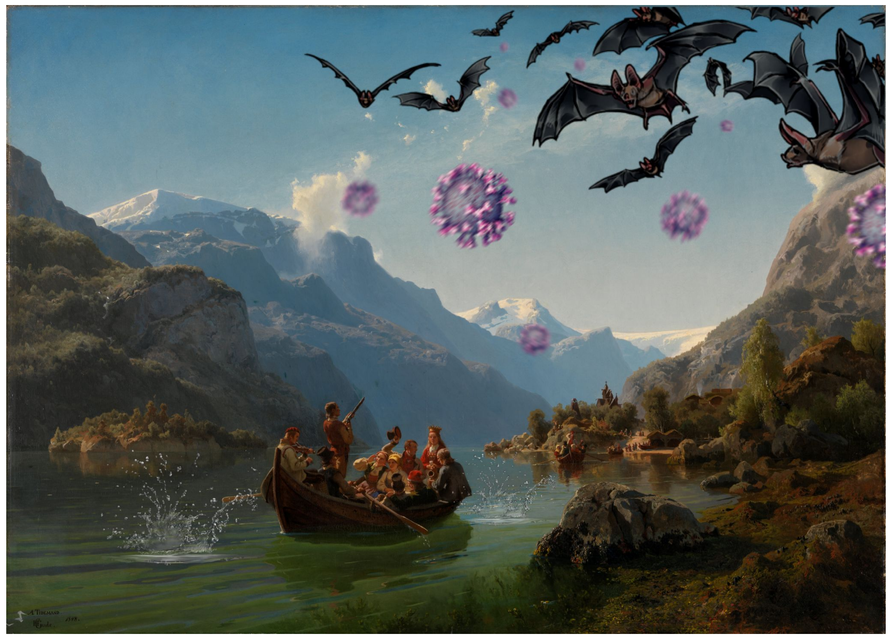
- 🇬🇧 α-variant B.1.1.7
- 🇿🇦 β-variant B1.351
- 🇧🇷 γ-variant P.1
- 🇮🇳 δ-variant B.1.617.2

COMBATING AN INVISIBLE FOE

Our brilliant and valiant biomedical laboratory scientists are working tirelessly in the front line, analyzing up to hundreds of SARS-CoV-2 samples each day, in order to nip the coronavirus in the bud before it gets out of hand.

Identifying those who are infected will help control the spread of COVID-19, by allowing them to seek treatment earlier and reducing the chances that they will infect others.

Correspondent team B21BIO07, have been able to reach out to two of the most prominent microbiology laboratories in Eastern Norway, to find out how they detect and identify these Variants of Concern:



SYKEHUSET ØSTFOLD

"We use real time RT-PCR to detect the presence of SARS-CoV-2 in patient samples," says Catherine, a molecular biologist at Østfold Hospital Kalnes.

"To confirm infection with a specific variant, we then screen SNP using specific real time RT-PCR melting curve analysis."

It is a method used to identify specific mutations within the variants. Each of these variants have their own unique set of mutations, making it possible to distinguish them from one another.

"For the ones we are not able to identify, we forward to FHI."

Oslo universitetssykehus

"At Oslo University Hospital, Ullevål, we whole-genome sequence every single positive coronavirus test," Maja and Lise explains.

Ullevål have an agreement with FHI to whole-genome sequence every single positive test as part of an monitoring and evaluation framework for COVID-19 response activities.

"It is our friends at the Department of Medical Genetics who do the whole-genome sequencing."

"We use Illumina sequencing technology," Teodora adds.

Implementing testing strategies and monitoring SARS-CoV-2 transmission rates are essential to maintaining the COVID-19 elimination status.

Their continuous efforts have provided us a small glimpse into what life could be like without any coronavirus, but they cannot do this by themselves.

Citizens still need to keep social distancing until the very end, to guarantee an eventual return to normalcy.

WILL THIS NIGHTMARE EVER END?

Even with these dark clouds brooding, there is still hope shining through — illuminating a path to the pandemic's end. We are starting to see progress in measurable ways, as more people are getting vaccinated.

But the future will depend heavily on herd immunity and how the virus evolves. As long as vaccines are able to remain effective against newer variants of SARS-CoV-2, we might have a shot at keeping it at bay.

However, the path to glory and salvation is still challenging and unpredictable. That is why it is important that we remain vigilant. If we start abandoning our strategies of reducing the spread of COVID-19 and let the virus reign unchecked, then the darkest days of the pandemic have yet to come. So saddle up kings and queens. We are just going to have to ride this one out.

"Hællæ"

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