



DIAGNOSIS OF COVID-19: CAN WE CATCH THEM ALL?



Alex Hung, Ph.D.

*HEAD OF PROTEIN SCIENCE DEPARTMENT
MESA BIOTECH*

Dr. Hung currently serves as the Head of Protein Science Department of Mesa Biotech. He leads R&D projects and oversees the manufacturing process of protein enzymes for the development of rapid molecular tests. Mesa Biotech recently received EUA (Emergency Use Authorization) from FDA for their Accula SARS-CoV-2 Test for COVID-19 diagnosis. Mesa's Accula SARS-CoV-2 Test is one of the very few CLIA-waived Point-of-Care (POC) rapid molecular tests on FDA's COVID-19 in vitro diagnostics EUA list.

Prior to joining Mesa, Dr. Hung obtained his Ph.D. degree in Biology from UC San Diego (UCSD) and then did his postdoctoral training in Sanford Burnham Prebys Medical Discovery Institute (SBP) and San Diego State University (SDSU) studying non-coding RNA functions and stem cell biology. Dr. Hung received his B.S. degree from National Cheng-Kung University (NCKU) in Taiwan.



ABSTRACT

The unprecedented COVID-19 pandemic has become a nightmare of all human beings on Earth. Among tools used to combat this invisible enemy, a reliable testing method has proven to be critical for controlling the spread of SARS-CoV-2, the virus that causes this pandemic, especially when the outbreak is still at an early stage or when regions transition to reopening. How to accurately identify infected persons in a timely manner thus has become one of the most challenging tasks in this battle.

In this talk, Dr. Hung will explain why a reliable testing method is important for controlling the pandemic. He will then go over what kind of testing methods can be used for this purpose and discuss their pros and cons. He will also talk about how we decide to choose which method to use according to the progress of the disease and phases of the outbreak.

Next, Dr. Hung will introduce several COVID-19 test methods that have been granted EUA (Emergency Use Authorization) from FDA in the U.S. and available for diagnostic use, and what the differences among those tests are. He will also talk on how testing has been done in the U.S. and suggest what more we can do to further improve the scale of testing and its efficiency.

Lastly, Dr. Hung will discuss what we have learned from the testing results in the U.S. and other countries. Combined with other medical data, we can then have a better understanding of the nature of this disease and the susceptibility to this disease for different groups of people and communities, whether the mitigation approaches work in specific regions and countries, and what phases we are in in this global pandemic.