BioSpectrum the business of Bio & Health Sciences

Redcliffe Life Sciences to tackle COVID-19 spread through Genome Sequencing

10 April 2020 | News

Company aims to undertake Genome Sequencing of COVID-19 for routine surveillance and outbreak response

In a bid to contribute towards the ongoing research and development around COVID-19, Redcliffe Lifesciences has submitted a proposal to the Ministry of Health, Government of India and the Indian Council for Medical Research (ICMR).

The diagnostic company who is also into therapeutics drug discovery and infectious disease testing aims to undertake Genome Sequencing of COVID-19 for routine surveillance and outbreak response.

The company aims to utilize its revolutionary technology for this purpose and provide a major boost to governmental efforts in tackling the pandemic.

The biggest challenge during any outbreak for scientists is to predict the pattern or evolution and disease spread, especially with RNA viruses such as the COVID19, which have very high genetic variability. This makes it difficult to understand the transmission pattern, number of active strains and their geographical locations, or if a person is affected with multiple strains.

Whole-genome sequencing (WGS) is a globally accepted practice and can prove to be a gamechanger in this regard by providing the highest possible resolution information about an organism's genome. It has the potential to transform infectious disease management and help combat the disease in a better manner.

Speaking about this, Ashish Dubey, Co-Founder, Redcliffe Life Sciences, said, "It is our endeavor and mission to assist in the efforts being made by the Government of India and other authorities in combating this pandemic. By providing our scientific input and using our technology, we believe that we can assist them evaluate most of the available information. Our aim is three-fold: understand the various strains of COVID-19 if any, found in the Indian public; evaluate the spread patterns of these mutations in different geographic areas, and predict the response of drugs on each such viral strain. We are positive about the opportunity offered by whole genome sequencing in taking quick treatment decisions for combating COVID-19."

Redcliffe's assay approach is helpful in targeting the entire coronavirus genome and can cover more than 99% of the viral genome and its variants. They have a proprietary computational pipeline that can automatically analyze the sequences and identify various viral strains based on patient samples. The enhanced understanding of the genetic makeup of this virus can eventually help in saving lives given the urgency and in forming strategies for public and clinical healthcare. It will also lead to the creation of therapies and vaccines to combat the virus.