What Can Pharma Learn from the New Oral Antivirals for COVID-19?

AI Gives the Pharmaceutical Industry Focus, Kishor Wasan Says

Chief medical and scientific officer of Skymount Medical Dr. Kishor Wasan has some answers

SASKATOON, SK, CANADA, January 31, 2022 /EINPresswire.com/ -- Pharmaceutical giant Pfizer got an early Christmas present from the FDA this year. Their oral medication Paxlovid received approval as the first FDA-approved oral antiviral treatment for COVID-19. The very next day, Merck & Company's and Ridgeback Biotherapeutics' antiviral pill molnupiravir also got the nod for treatment of mild-to-moderate COVID in the USA.

These new therapeutics benefited from substantial investment by the U.S. government's Warp Speed program. But can Big Pharma expect additional financial or regulatory intervention for finding innovative treatments to ameliorate the pandemic? Are there ways to bring the same kind of acceleration of new therapeutics to other diseases? Chief medical and scientific officer of Skymount Medical Dr. Kishor Wasan has some answers.

Current regulations for new pharmaceuticals are being reinforced, Kishor Wasan says

Early on during Warp Speed in the United States, Wasan told Marketscale, there were programs to accelerate current standards to try to get things out into the market to deal with the pandemic. There was an accelerated review process, and an accelerated review process, but no reduction in the rigor of review by the FDA. We aren't changing the regulations, Dr. Wasan says, but people have calmed down and are saying that we follow the regulations that we have for any drug, making sure we have the safety data, the efficacy data, the scale of manufacturing data, and the large population data that say that a candidate drug is effective and poses acceptable risk.

Every drug carries some risk. It comes down to a risk-benefit analysis. Regulation is still rigorous to get any drug approved.

Artificial intelligence is speeding up the identification of new drug candidates

Kishor Wasan explains how his company, Skymount Medical, is facilitating accelerated drug identification, safety studies, and clinical trials in partnership with academia.

Skymount Medical is in partnership with Louisiana State University, which has developed an algorithm named DeepDrug. Louisiana State has modeled all potential drug candidates that can inhibit different aspects of the virus, entry, replication, transmission, and so on. Viruses take over human proteins to carry out their own functions. DeepDrug has identified pharmaceuticals that can prevent that process.

Skymount then looks at those drugs through their pharmacology program. Skymount's programs are contracted to the Illinois Institute of Technology Research Institute (IITRI) in Chicago, at the University of Saskatchewan's VIDO-InterVac Animal Testing Center, and at UC Riverside, and at McGill and Laval Universities.

Skymount is running a clinical trial of a combination of two drugs that are already approved by the FDA. These drugs are well-known, cost-effective, and scalable to mass production. The process of identifying these drugs has taken less than 15 months thanks to DeepDrug.

How the Pharmaceutical Pipeline Balance Speed and Quality?

Artificial intelligence can predict which drugs are likely to be effective against COVID-19, as well as those that are not. DeepDrug was able to say, Wasan points out, that chloroquine and hydroxychloroquine were not likely to be effective. Big Pharma didn't go down the path of doing further research with these early drug candidates because DeepDrug said these drugs are not necessarily going to work.

AI saves the pharmaceutical industry time and money, and focuses on the drugs and drug combinations that have a chance to deal with different aspects of a disease. Validation is still necessary. The industry doesn't make the leap from AI to clinical administration. But AI is a profoundly useful tool for identifying candidate drugs that can be validated by conventional cell work, animal work, and clinical trials.

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