Dr. Kevin Dalby Discusses Steps Needed for the COVID-19 Vaccine to Get Approval

Professor at the University of Texas in Austin, Dr. Kevin Dalby comments on the steps required before a potential vaccine against COVID-19 can be approved.

AUSTIN, TEXAS, USA, October 7, 2020 /EINPresswire.com/ -- Utilizing vaccination as a method to prevent the spread of infectious viruses has been popular for decades. Many labs worldwide are in an arms race to determine who can successfully create a vaccine for COVID-19. If successful, a vaccine for the virus will stimulate the human body's immune system to safely and effectively generate antibodies to protect itself from the COVID-19 virus.

Dr. Kevin Dalby has been leading in a research program in response to the coronavirus pandemic for several months. A professor of chemical biology and medicinal chemistry at the University of Texas in Austin, Dr. Dalby has been recognized by the National Institute of Health and the Cancer Prevention and Research Institute of Texas (CPRIT). Grants from both support the research in his laboratory. Here he shares the steps laboratories must walk through before a COVID-19 vaccine can be readily available to the public.

Vaccines traditionally begin their development cycles with a pre-clinical testing phase. This stage involves infecting test animal subjects with the virus. Research is then conducted to study immune responses to understand what is crucial for protection. In severe or rapidly spreading cases such as a pandemic, this stage is optional. With the COVID-19's global presence, some laboratories work through this stage while others fast-tracked to test human subjects.

The next step is Phase 1 trials. This phase entails testing the vaccine in a small group of individuals to identify a safe dose that can repeatedly stimulate the immune system. Scientists aren't sure yet if the immune response generated will protect the body from the virus during this testing phase.

Phase 2 trials increase the number of test recipients from a small group to hundreds or potentially thousands of individuals. Phase 2 aims to sustain the focus of the vaccine's safety and repeated immune response in individuals. Scientists want to ensure the vaccine is safe and can create a consistent response in all participants' immune systems.

In Phase 3 trials, the testing population increases to tens of thousands. This phase also introduces a placebo concept to compare the number of sick people in each group. By

comparing a placebo group and a vaccinated group, scientists can begin identifying if the vaccine will protect people from the virus in a real-world setting.

While some laboratories have combined phases or have been granted approvals to expedite studies, all researchers will ultimately have to pass through the culmination of phases successfully before a vaccine for the COVID-19 virus can be approved to introduce to the public.

About Dr. Kevin Dalby
Dr. Kevin Dalby is a chemical biology professor and medicinal chemistry professor currently working on cancer drug discovery. At the College of Pharmacy at The University of Texas, he examines the mechanisms of nature and cancer to develop new treatments and teach and motivate students to conduct research. Professor Kevin Dalby is optimistic about the future of cancer treatments.

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