To: Ms. Latasha Buckner Secretary Jim Gray Secretary Larry Hayes Secretary Larry Roberts

From: Dr. Neeli Bendapudi, President, University of Louisville Dr. Eli Capilouto, President, University of Kentucky

Ben Chandler, President and CEO, Foundation for a Healthy Kentucky Ashli Watts, President and CEO, Kentucky Chamber of Commerce

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RE: Supporting Public Health and Economic Policies During COVID-19

As Kentucky takes steps to reopen the economy, the pattern of careful, factbased actions by our policy and health leaders continues to give top priority to protecting the health and wellbeing of our citizens.

Kentuckians recognize the appropriateness of the state's actions to lessen the impact of the coronavirus pandemic, particularly on the most vulnerable, and understand the need to limit economic, civic and social activities across the Commonwealth.

When the virus initially began spreading, and very little information was available about how fast it spread, its fatality rate or which groups of people were most vulnerable, broad efforts were warranted. This included shutting down large parts of society and the economy.

The shutdown has had a significant impact on individuals, businesses, communities and the state as a whole. Among the many unknowns this pandemic has created for our society is how long it will take to recover our health, wellbeing, and financial stability.

These questions persist as health experts predict the likelihood of a resurgence of the virus, possibly recurring, as efforts continue to develop a vaccine and cure.

The weeks that have passed since the onset of the crisis have provided important, if painful, experience that Kentucky can now build on to support and reinforce the critically important efforts of Governor Beshear and his team in the event of a resurgence or even steady presence of the coronavirus.

As the state and nation have turned to science for factual information about the coronavirus and its health effects, we have an opportunity to use scientific and medical research to gauge the anticipated health, social, and economic impact of a resurgence. This research will prove invaluable to informing decisions about areas of work, shop, play, care, and learning where individuals are the most

vulnerable to contracting the virus. It will also give us more specific information about those at high risk of serious illness if exposed, which leads logically to more targeted public health policies.

The work, already underway in Jefferson County, is the Co-Immunity Project. With sufficient financial support, the research could expand from Kentucky's most populous county to the entire state.

From a medical perspective, this research will provide, for the first time, the real percentage of the population that has been infected, have symptoms and were treated as well as the array of outcomes. The information will be presented by age, gender, race, and location in the community.

This data would allow health and policy leaders to determine if the rate of infection is increasing or decreasing, and which parts of the state are most affected. Because the same number of tests will be performed each time, the increase in the number of positive tests would not be due to an increase in testing. Such information would help the state catch any resurgence in the rates of infection early before spreading widely and determine whether it would overwhelm the current health care capacity.

Currently, all Kentuckians are being encouraged to get tested and, as a result, most of those submitting to the test are self-selected. Administering the test to a random sampling of the population, which is reflective of the population mix (age, race, sex) in the area, would better estimate the actual infection rates and improve the identification of those who have had the virus and have recovered or have remained asymptomatic.

The Co-Immunity project also brings together a team of economists from the University of Kentucky and the University of Louisville to consider the social and economic implications of the medical data. Combining health information with such data as the economic impact of businesses and the characteristics of people who work at or frequent different types of businesses would enable the development of data-driven measures on what types of businesses could safely remain open and what types of workers could continue to work.

This evidence will support more targeted public health and economic policies as alternatives to broader closing, such as reopening and closing in cycles that may occur until a vaccine or a highly effective treatment is developed.

Of greatest importance is the fact that this information would allow Kentucky to effectively protect its most vulnerable citizens in a less costly manner.

The following overview provides more details about the Co-Immunity Project as it is being conducted in Jefferson County.

- A random sample of the County population has been identified by a research organization (Westat) preferred by the Centers for Disease Control and Prevention. The sample size directly addresses age, gender and race and indirectly addresses socioeconomic status. Letters have been mailed to the randomly selected households uniformly spread around the county.
- Individuals are tested for current and past COVID-19 infections and complete a questionnaire that provides demographic and medical information. There are three drive-up testing sites in the county, operated by University of Louisville Health.
- The individuals tested are informed of the results. They are invited to a follow-up testing after six months to learn about their subsequent exposure and immunity.
- The process is repeated every eight weeks with a new random sample of residents.
- Parallel research is being conducted on health care workers at the University of Louisville Hospital as well as Baptist and Norton Hospitals and area nursing homes,
- Random community sampling will be complemented by twice-a-week sampling of wastewater at 20 different locations around the county to detect the virus. This will provide weekly estimates of changes in the level of infections in different areas.

The Co-Immunity Project is a strong candidate for financial support from the Coronavirus Aid, Relief, and Economic Security Act (CARES) fund. Guidance issued to the states by the U.S. Treasury Department on April 22, 2020, specifically indicates that "costs of providing COVID-19 testing, including serological testing" are eligible expenditures of funds provided under the CARES Act. The proposed statewide expansion of the Co-Immunity Project falls directly within these guidelines.

The Kentucky Chamber of Commerce and the Foundation for a Healthy Kentucky join the University of Kentucky and the University of Louisville in supporting the expansion of the Co-Immunity Project across the Commonwealth. We believe it would produce valuable data that would protect the lives and livelihoods of Kentuckians as we move ahead.