

A genetic variation could help explain the high rate of COVID-19 among African Americans

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Robert Winn, director of VCU Massey Cancer center. Credit: Massey Cancer Center

VCU Massey Cancer Center Director Robert Winn, M.D., recently

collaborated on research that identified a genetic factor that could partly account for the high prevalence of COVID-19 in African Americans. The study, published in the *Journal of Racial and Ethnic Health Disparities*, provides "a strong argument" for using existing blood pressure and heart failure drugs to manage severe symptoms of the novel coronavirus.

Hypertension, obesity and diabetes are major risk factors associated with poor outcomes of COVID-19 infection. Additionally, the variation of a specific gene, known as ACE, is associated with increased COVID-19 incidence and mortality.

Winn's research highlighted a significant prevalence of ACE alteration among African Americans. This genetic aberration is linked to lung and kidney dysfunction, both of which are underlying risk factors for COVID-19 infection that correspond to worse outcomes and increased fatality.

"The frequency with which we observed this [genetic variation](#) among African Americans is likely responsible in some manner for the severity of COVID-19 comorbidities and mortality in the same population," said Winn, who is also the senior associate dean for cancer innovation and a professor in the Division of Pulmonary Disease and Critical Care Medicine at the VCU School of Medicine.

"Our findings provide a strong argument for the use of existing [blood pressure](#) and heart failure medications as effective clinical strategies to reduce serious complications and improve outcomes in COVID-19 patients," he said.

Winn collaborated on this study with scientists from Oxford University and BERG, a clinical-stage biotech company that uses artificial intelligence to research diseases and develop innovative treatments.

As many companies work to develop new vaccines and treatments for the novel [coronavirus](#), BERG recognizes the need to use current clinical therapeutics to manage the severity of infection in [vulnerable populations](#), said Niven R. Narain, Ph.D., BERG's president and CEO.

"COVID-19 has posed a great challenge to the world, and BERG has partnered with like-minded academic institutions and the U.S. government to address outcome disparities and identify re-purposing opportunities for drugs to manage the symptoms and complications of the virus," Narain said.

More information: Rangaprasad Sarangarajan et al. Ethnic Prevalence of Angiotensin-Converting Enzyme Deletion (D) Polymorphism and COVID-19 Risk: Rationale for Use of Angiotensin-Converting Enzyme Inhibitors/Angiotensin Receptor Blockers, *Journal of Racial and Ethnic Health Disparities* (2020). [DOI: 10.1007/s40615-020-00853-0](https://doi.org/10.1007/s40615-020-00853-0)

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