

News Release
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Media Contacts:

Leslie W. Taylor, 501-686-8998
Wireless phone: 501-951-7260
leslie@uams.edu

Yavonda Chase, 501-686-8994
Wireless phone: 501-416-0354
yavonda@uams.edu

**UAMS Releases Findings from Statewide COVID-19
Antibody Study**
Results Underscore Need for Vaccinations

LITTLE ROCK — A statewide COVID-19 antibody study led by UAMS found that by the end of 2020, 7.4% of Arkansans had antibodies to the virus, but there were wide disparities among racial and ethnic groups. UAMS researchers released their findings this week to a public database, medRxiv (med archive).

The study included analysis of more than 7,500 blood samples from children and adults across the state. It was conducted in three waves from July to December 2020. The work was supported by \$3.3 million in federal coronavirus aid that was then allocated by the Arkansas Coronavirus Aid, Relief and Economic Security Act Steering Committee created by Gov. Asa Hutchinson.

Unlike diagnostic tests, COVID-19 antibody testing looks back into the immune system's history. A positive antibody test means the person was exposed to the virus and developed antibodies against SARS-CoV-2, the virus that causes the disease known as COVID-19.

“An important finding of the study is the significant differences in COVID-19 antibody rates detected within specific racial and ethnic groups,” said Laura James, M.D., the study's principal investigator and director of the UAMS Translational Research Institute. “Hispanic populations were almost 19 times more likely to have SARS-CoV-2 antibodies than whites, and Blacks were five times more likely to have antibodies as whites during the course of the study.”

These findings highlight the need to understand factors that impact SARS-CoV-2 infection in underrepresented minority populations, she added.

The UAMS team collected blood samples from children and adults. The first wave (July/August 2020), revealed low rates for SARS-CoV-2 antibodies, averaging 2.6% in adults. However, by November/December, 7.4% of adult samples were positive.

Blood samples were collected from individuals seen at medical clinics for non-COVID reasons and who were not known to have had COVID-19 infection. The antibody positivity rates reflected cases of COVID-19 in the general population.

While the overall positivity rate in late December was relatively low, the findings are important because they indicate previously unrecognized COVID-19 infections, said UAMS' Josh Kennedy, M.D., a pediatric allergist and immunologist who helped lead the study.

“Our findings underscore the need for everyone to get vaccinated as soon as they can,” Kennedy said. “Very few people in the state have immunity from a natural infection, so vaccination is key for getting Arkansas out the pandemic.”

The team found little difference in antibody rates between rural and urban residents, which surprised researchers who thought rural residents might be less exposed.

The antibody test was developed by UAMS' Karl Boehme, Ph.D., Craig Forrest, Ph.D., and Kennedy. Boehme and Forrest are associate professors in the College of Medicine Department of Microbiology and Immunology.

The UAMS College of Public Health helped identify study participants through their contact tracing call center. In addition, samples were obtained UAMS Regional Program sites across Arkansas, the Arkansas Federation for Medical Care and the Arkansas Department of Health.

Faculty within the UAMS Fay W. Boozman College of Public Health and College of Medicine participated in the epidemiologic and statistical evaluation of the data and included College of Public Health Dean Mark Williams, Ph.D., Benjamin Amick, Ph.D., and Wendy Nembhard, Ph.D., as well as Ruofei Du, Ph.D. and Jing Jin, MPH.

The study represents a major collaboration for UAMS, including the Translational Research Institute, Regional Programs, the Rural Research Network, the College of Public Health, the Department of Biostatistics in the College of Medicine, UAMS Northwest Regional Campus, Arkansas Children's, the Arkansas Department of Health and Arkansas Foundation for Medical Care.

The Translational Research Institute is supported by grant TL1 TR003109 through the National Center for Advancing Translational Sciences of the National Institutes of Health (NIH).

UAMS is the state's only health sciences university, with colleges of Medicine, Nursing, Pharmacy, Health Professions and Public Health; a graduate school; hospital; a main campus in Little Rock; a Northwest Arkansas regional campus in Fayetteville; a statewide network of regional campuses; and seven institutes: the Winthrop P. Rockefeller Cancer Institute, Jackson T. Stephens Spine & Neurosciences Institute, Harvey & Bernice Jones Eye Institute, Psychiatric Research Institute, Donald W. Reynolds Institute on Aging, Translational Research Institute and Institute for Digital Health & Innovation. UAMS includes UAMS Health, a statewide health system that encompasses all of UAMS' clinical enterprise including its hospital, regional clinics and clinics it operates or staffs in cooperation with other providers. UAMS is the only adult Level 1 trauma center in the state. *U.S. News & World Report* named UAMS Medical Center the state's Best Hospital; ranked its ear, nose and throat program among the top 50 nationwide; and named six areas as high performing — COPD, colon cancer surgery, heart failure, hip replacement, knee replacement and lung cancer surgery. UAMS has

2,876 students, 898 medical residents and four dental residents. It is the state's largest public employer with more than 10,000 employees, including 1,200 physicians who provide care to patients at UAMS, its regional campuses, Arkansas Children's Hospital, the VA Medical Center and Baptist Health. Visit www.uams.edu or www.uamshealth.com. Find us on [Facebook](#), [Twitter](#), [YouTube](#) or [Instagram](#).

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