

NIH funds research to study pediatric COVID-19 and related conditions

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The National Institutes of Health (NIH) in the US has awarded eight research grants to develop approaches for identifying children at high risk for Multisystem Inflammatory Syndrome in Children (MIS-C), a rare and severe after-effect of COVID-19 or exposure to the virus that causes it. Up to \$20 million will be provided for the projects over four years, pending the availability of funds.

"These awards underscore NIH's commitment to identifying children at risk for MIS-C, which will inform development of interventions to improve their health outcomes," said Diana Bianchi, Director, NIH's *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD). NICHD and the National Heart, Lung, and Blood Institute lead the NIH-wide effort to understand the SARS-CoV-2 spectrum of illness among children.

The NIH awards will fund studies enrolling children with diverse geographic, racial and ethnic backgrounds across 30 US States, Canada, the UK and South America. The studies will explore how genetic, immune, viral, environmental, and other factors influence the severity of COVID-19 in children and the chances of progression to MIS-C and other long-term complications.

The new awards will evaluate genes, immune system proteins, and other biomarkers, examine how the virus interacts with the body and how the immune system responds to it.

The awardees and project names are as follows:

Jane C Burns, University of California, San Diego

Diagnosing and predicting risk in children with SARS-CoV-2- related illness

Cedric Manliot, Johns Hopkins University, Baltimore

A data science approach to identify and manage MIS-C associated with SARS-CoV-2 infection and Kawasaki disease in paediatric patients

Ananth V Annapragada, Baylor College of Medicine, Houston

Artificial intelligence COVID-19 risk assessment for kids

Audrey R Odom John, Children's Hospital of Philadelphia

Diagnosis of MIS-C in febrile children

Usha Sethuraman, Central Michigan University, Mount Pleasant

Severity predictors integrating salivary transcriptomics and proteomics with multi neural network intelligence in SARS-CoV2 infection in children

Juan C Salazar, Connecticut Children's Medical Center, Hartford

Identifying biomarker signatures of prognostic value for MIS-C

Charles Yen Chiu, University of California, San Francisco

Discovery and clinical validation of host biomarkers of disease severity and MIS-C with Covid-19

Lawrence Kleinman, Rutgers Robert Wood Johnson Medical School, New Brunswick, New Jersey

COVID-19 Network of Networks Expanding Clinical and Translational approaches to Predict Severe Illness in Children