

Two novel immune-response clusters identified to RSV

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(HealthDay)—Two novel immune-response clusters have been identified

to respiratory syncytial virus (RSV), and they are associated with first- and second-year recurrent wheeze, according to a study published online May 7 in the *American Journal of Respiratory and Critical Care Medicine*.

Kedir N. Turi, Ph.D., from Vanderbilt University Medical Center in Nashville, Tenn., and colleagues recruited a birth cohort of term healthy infants and followed them to capture the first infant RSV infection. During [acute respiratory infection](#), nasal wash samples were collected and viruses were identified; using a multi-analyte bead-based panel, immune response analytes were assayed and clusters were identified using machine learning.

The researchers identified two novel and distinct immune-response clusters to RSV and human rhinovirus (HRV). There were significant associations for a nasal immune-response [cluster](#) characterized by lower non-interferon anti-viral immune-response mediators and higher type-2 and type-17 cytokines with first- and second-year recurrent wheeze in RSV-infected infants. This was not observed in HRV acute respiratory infection [infants](#). Type-2 and type-17 cytokines were central to the RSV immune response, while growth factors and chemokines were central to the HRV immune response.

"Distinct immune-response clusters during infant RSV infection and their association with risk of recurrent wheeze provide insights into the risk factors for and mechanisms of asthma development," the authors write.

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)

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