

## 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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