

**Pressemitteilung****Martin-Luther-Universität Halle-Wittenberg****Cornelia Fuhrmann, M.A.**

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Medizin  
überregionalMARTIN-LUTHER  
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HALLE-WITTENBERG**University Medicine Halle: breakthrough in post-viral inflammation syndrome research**

**A team of scientists around Professor Dr Mascha Binder, director of the Department for Internal Medicine IV (Haematology/Oncology) at University Medicine Halle has achieved a breakthrough in researching the multisystem inflammatory syndrome in children (MIS-C) in cooperation with a US consortium. This syndrome can develop in children – particularly in school-age children – after a SARS-CoV-2 infection. MIS-C is characterized by inflammation of organs such as the skin, heart, gastro-intestinal tract, lungs, liver and kidney. Some of the features of the disease overlap with those of sepsis. As many as 25% of children and adolescents affected require intensive care treatment.**

MIS-C does not appear immediately after an infection with the corona virus, but only up to six weeks later. Professor Binder's team explored potential causes vis-à-vis the onset of MIS-C. "One of the biggest questions surrounding this syndrome had been why it affects some children but not others," Professor Binder explains. "We were first to show that a certain type of HLA tissue characteristics seems to be linked to developing MIS-C. These tissue properties are rare, which explains why fortunately few children develop this potentially life-threatening syndrome after a COVID-19 infection."

The team's research also showed that the immune systems of children who have MIS-C can attack their body's own structures while they have the syndrome. This explains organ issues in children with MIS-C. Professor Binder recommends parents whose children display inflammatory symptoms or other abnormalities following recovery from an infection with SARS-CoV-2 to consult a physician to rule out MIS-C or provide adequate treatment.

The data produced in collaboration with scientists from Boston and Los Angeles has been extremely well-received by the international medical and research community. The results have been published in two articles in the Journal of Clinical Investigation.

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Originalpublikation:

„HLA Class I-associated expansion of TRBV11-2 T cells via a CDR3-independent mechanism in Multisystem Inflammatory Syndrome in Children (MIS-C)“, <https://www.jci.org/articles/view/146614>, DOI: 10.1172/JCI146614

„The autoimmune signature of hyperinflammatory multisystem inflammatory syndrome in children“, <https://www.jci.org/articles/view/151520>, DOI: 10.1172/JCI151520

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