

NETosis Induced by Serum of Patients with COVID-19 is Reduced with Reparixin or Antibodies Against DEK and IL-8.

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Abstract

DEK locates in the nucleus of the cells or the cytoplasmic granules of neutrophils and plays different roles in cellular processes including NETosis, a suicide mechanism of neutrophils. Here we showed that the interaction of rDEK with CXCR2 leads to NETosis, which could be reduced by the CXCR1/CXCR2 inhibitor reparixin. We found that IL-8, IL-6, IL1- β , MPO, and CitH3 were increased whereas DEK was decreased in the serum of COVID-19 patients. Interestingly, reparixin or anti-DEK antibody reduced the NETosis induced by the patients' serum, suggesting that initial cytokine stimulation may further induce the release of DEK. Our results support the use of reparixin as a potential therapeutic strategy in COVID-19 and suggest that DEK-CXCR2 interaction plays a role in NETosis.

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