

The effects of leptin on neutrophil extracellular trap (NET) formation

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Obesity is defined a risk factor for several chronic inflammatory disorders, and leptin is highly secreted by adipose tissue. Whether released leptin contributes to inflammation or not is a challenging issue. In addition, it would be beneficial to identify the molecular mechanism of leptin-induced inflammation in the pathogenesis of disorders. Up to date, leptin was shown to promote neutrophil migration and neutrophil longevity. However, no research has been conducted to clarify the relationship between leptin and NET formation according to the literature. A recent study published in Scientific Reports has also shown that severe obesity is associated with increased generation of NETs, which in turn could influence the patients' systemic inflammatory state. However, the molecular mechanism of it still remains unclear. So, leptin might be the reason for obesity-induced NET formation. The aim of the current project is to investigate the possible effects of leptin on NET formation. In all experiments, NET formation will be visualized by fluorescence microscopy and quantified by evaluation of the DNA released in the supernatants by fluorometry or ELISA.

Projektbeteiligte

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