

Factor for impaired immune response in pneumonia identified

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(Medical Xpress)—Macrophages, also known as scavenger cells, play an important role in defending against bacteria and pathogens by activating inflammatory processes. In cases of lung inflammation (pneumonia) caused by pneumococcal bacteria, this important immune response function is hampered and blocked by the protein lipocalin 2. These are the findings of scientists at the MedUni Vienna, led by Sylvia Knapp, Head of the Infection Biology Laboratory at the University Department of Internal Medicine I.

The results of the study have now been published in the highly respected "Journal of Clinical Investigations": "The higher the lipocalin 2 level, the poorer the prognosis," summarises Knapp. The protein, which can be very important generally in the uptake of iron in the body, stops macrophages from starting the vital [inflammatory processes](#). How they do this, however, has not yet been discovered.

Lipocalin 2 has a dual role to play, explains Knapp: "Firstly, it disables the macrophages itself, and secondly it acts as a marker for disabled scavenger cells." Lipocalin 2 may therefore also be used in future as a bio-marker for pneumonia.

The researchers also discovered that [intensive care patients](#) with pneumonia who were treated with a cortisone inhaler also excreted lipocalin 2 in high quantities, thereby producing precisely the opposite effect to the one desired. Says Knapp: "This means that affected patients should at least use their cortisone inhalers on a limited basis."

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