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Title: Pulmonary haptoglobin (pHp) is a scavenger system preventing arterial leakages

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Body: Haptoglobin is a long known molecule. The recently discovered pHp variant is coming into focus in the coarse of immunoregulatory events in the human lung. Here we describe the fast release of pHp upon different stimuli using a human tissue culture model, cultivated BAL-cells and a cell line (A549). Dependent from the certain cell types we show that pHp get released in different time frames. Whereas the macrophages need up to 36h of stimulation with LPS dexamethasone or IL6, epithelial cells react much faster. We regularly measured reasonable amounts of pHp in the supernatants of human tissue cultures after stimulation periods as short as 5 minutes. Due to the well known anti-inflammatory properties of haptoglobin and the capability to bind and neutralize free hemoglobin, we propose pHp to be a local first line immunoregulatory molecule which could play a crucial role in quickly fixing alveolar damages e.g. due to arterial leakage. The signalling leading to pHp-release need to be illuminated, however, the speed makes it easy to speculate about a system that is largely independent from the common pathways such as TLR-signaling.