ANNA LINDBLAD is a registered biomedical scientist. She received her Master´s degree in 2017 and has been a PhD student at the School of Medical Sciences at Örebro University since 2018. Her PhD studies have been combined with laboratory work at Visby hospital.

Urinary tract infection (UTI) is one of the most common infections and the primary cause is uropathogenic Escherichia coli (UPEC). The urinary tract is normally protected against bacteria by immune cells, antibacterial factors and by the rinsing of urine. However, UPEC have acquired strategies to subvert the host defense and thereby persist in the urinary tract. The NLPR3 inflammasome is a key component of the innate immune system. The inflammasome-associated proteins caspase-1, caspase-4 and NLRP3 are vital in the host cell response during UTI by regulating IL-1β release. The aim of this thesis was to investigate what role caspase-1, caspase-4, NLRP3 and IL-1RA have on the pro-inflammatory host response evoked by UPEC and their role in recurrent UTI. Thus, the present study investigates the interaction between UPEC and bladder epithelial cells and the role the inflammatory-associated proteins have on the immune response during UTI.

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