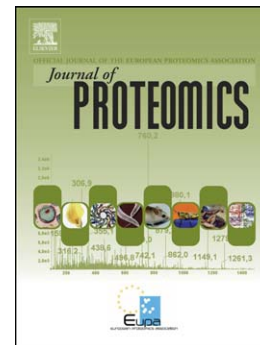


## Accepted Manuscript

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## Characterization of human and *Staphylococcus aureus* proteins in respiratory mucosa by *in vivo*- and immunoproteomics

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### Abstract (200 words)

*Staphylococcus aureus* is a Gram-positive opportunistic bacterium which can be found as a commensal in the nares of about 50% of the human population. Besides asymptomatic carriage, *S. aureus* has also been found to colonize nasal polyps, a subform of chronic rhinosinusitis, in 60 to 100% of cases, and even reside intracellularly in nasal polyp tissue. The aim of this study was to shed light on the behavior of *S. aureus* in the human airways by analyzing *S. aureus*-specific proteins in nasal polyp tissue from patients with chronic rhinosinusitis and to characterize the immunogenic potential of the identified (mainly secreted) proteins. As a result, in total more than 600 *S. aureus* proteins were identified by high resolution mass spectrometry or multiple reaction monitoring. Of those roughly 180 are typically localized in the membrane, surface exposed or secreted. For 115 *S. aureus*

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