

**P148***The role of chemical cues for antiseptic behaviours in ants***Line V. Ugelvig**, Sylvia Cremer

Chemical cues are crucial in transmission of information and regulation of processes within social insect societies. The origin of chemical cues is highly diverse, and so is the response they trigger, including both physiological and behavioural changes in individuals. Here we investigate the role of chemical cues - and their perception - for ant workers' performance of collective antiseptic behaviours. Ant workers express a composite behavioural response towards brood exposed to fungal pathogens. This is manifested in a care-kill dichotomy, where workers groom exposed brood to free them for pathogens, yet at the same time remove - and thereby doom - incurable brood to free the colony for pathogens. We focus our investigation on time points that correspond to the onset of these behavioural responses, that is, chemical cues that elicit grooming behaviour and disposal of brood. By combining standard and novel methodology we analyse cuticular hydrocarbons and more volatile compounds, which stem from changes in the ant brood's odour after pathogen exposure and infection or from the pathogen itself.