

# Joint KJELDGAARD & DANDRITE Lecture

**Thursday 5 October 2017 at 13:15 - 14.00**  
Building 1324, Aud. 025 (Twin auditoriums),  
Aarhus University



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## Drosophila olfactory neuroecology

The sense of smell is not only of pivotal importance to most animals - it also serves as a significant model system in biological research, in areas ranging from neuronal information processing to developmental biology. In the past 15 years, great strides in our understanding of how the olfactory system is organized and operates have been made. Instrumental in these efforts has been work performed in the vinegar fly *Drosophila melanogaster*. In fact, for no other complex organism do we have a similar level of in-depth understanding of the olfactory system's physiological, molecular and anatomical organization. However, in spite of the wealth of information gathered, we still do not know the functional significance of the observed organization. How the fly's olfactory system, or in fact any other olfactory system, is used to actually decode the chemical environment remains unknown. My lab combines neurophysiological, molecular, phylogenetic, behavioral, ecological and chemical approaches in order to pinpoint specific neural circuits and molecular mechanisms underlying olfactory-guided behaviors triggered by ecologically relevant odors. I will here outline recent work from our lab aiming at unraveling the ecological significance of discrete olfactory pathways in the fly.

**Host:** Group Leader Anne von Philipsborn, Dept. of Molecular Biology and Genetics ,  
DANDRITE - Danish Research Institute of Translational Neuroscience,  
Aarhus University

The Kjeldgaard Lecture Series is organised by  
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