

ORAL PRESENTATION

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# The database of odor responses (DoOR) - Mapping the fruit fly's odor space

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The database of odor responses (DoOR) is a repository for odor response measurements in the fruit fly *Drosophila melanogaster*. Olfactory receptors have broad, overlapping response spectra, and olfactory coding relies on activity patterns across the entire receptor array. It is therefore of interest to record receptor responses to a large set of odorant molecules, as opposed to only finding the respective best ligand.

The fruit fly has since long served as a model organism, resulting in a large number of odor response measurements that are available in the literature. Going beyond archiving the (odorant x receptor) response matrices from a growing number of studies on *Drosophila* olfaction, DoOR also provides a consensus matrix that integrates data from different studies using different techniques [1]. Such data integration leads to a larger odor response space than available from any single study.

Apart from encyclopedic applications, DoOR can be used e.g. to estimate odor (dis)similarity as “perceived” by *Drosophila*, and it has already served as realistic input data for a modelling study on odor processing in the antennal lobe [2]. DoOR is available both as a web-based GUI and as package for the R platform [3].

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## References

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