



Predicting human olfactory perception from chemical features of odor molecules

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Editor's Summary

How will this molecule smell?

We still do not understand what a given substance will smell like. Keller *et al.* launched an international crowd-sourced competition in which many teams tried to solve how the smell of a molecule will be perceived by humans. The teams were given access to a database of responses from subjects who had sniffed a large number of molecules and been asked to rate each smell across a range of different qualities. The teams were also given a comprehensive list of the physical and chemical features of the molecules smelled. The teams produced algorithms to predict the correspondence between the quality of each smell and a given molecule. The best models that emerged from this challenge could accurately predict how a new molecule would smell.

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