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Recognition of cinnamon smell (Gisladottir, 2020)

Rosa Gisladottir, et al.
Current Biology

Nose Senses

STUDY SUMMARY

Identification of a region of the genome associated with the ability to recognize the smell of cinnamon.

STUDY DESCRIPTION

The perception of smell is enabled by olfactory receptors, which are proteins that bind odor molecules. Humans have about 350 olfactory receptor genes that each can detect a number of different odor compounds that together can create a vast number of different scents. However, when presented with the same smell, different individuals vary in their ability to identify the smell. This genome-wide association study looked at the genomes of over 11,000 Icelandic people to identify the genetics underlying differences in the detection of the scent of cinnamon. The researchers found one region of the genome associated with an individual's ability to recognize the scent of cinnamon. The variant lies between multiple olfactory receptor genes, including one (OR52D1) that has previously been found to play a role in the detection of at least 45 different odor compounds.

DID YOU KNOW?

Recent studies have found that the human olfactory system may be able to detect over a trillion scents.

YOUR DETAILED RESULTS

The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to cecognition of cinnamon smell. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to cecognition of cinnamon smell. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to cecognition of cinnamon smell. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our Nebula Library tutorial.

VARIANT	YOUR GENOTYPE	EFFECT SIZE	VARIANT FREQUENCY	SIGNIFICANCE
rs317787_T NEW	C / C	0.75 (–)	32%	5.00×10^{-17}