

GENETICS AND ODOR PERCEPTION

A large battery of Olfactory Receptor (OR) genes allows us to distinguish many odors (and tastes). The OR family is the biggest gene family in mammals. Counting genes as well as pseudogenes, there are, indeed, more than 800 OR loci in man and more than 4000 in the elephant ([Genome Research](#)). Many of them, however, are non-functional. In man, more than half of them are non-functional pseudogenes. However, OR population genetics has shown that two thirds of human OR loci segregate between an intact and inactivated alleles ([BMC Genomics](#)), indicating that humans have a highly personalized repertoire of ORs. A recent paper in [Current Biology](#), by the Stefansson's group, adds a further inter-individual diversification. The authors analyzed 9,122 Icelanders and replicated their results in a separate sample of 2,204 individuals. They found that the difference between two alleles is not always as simple as active or inactive. The authors identified variants of three genes associated with odors of licorice, cinnamon and fish, where the same odor is differently perceived and named. Thanks to the *TAAR5* gene, many of us perceive the odor of rotten fish as disgusting. Individuals carrying a variant of this gene do not perceive it at all or positively describe it as potatoes, caramel or rose.