Glycoside flavour release in-mouth: the role of oral bacterial populations

Aim: To understand whether human oral microbiota determine release of aroma compounds from glucosides in saliva

- Oral bacteria are the main source of enzymes capable of breaking down glucosides in the human mouth.
- When glucosides break down in the mouth, aroma compounds are released, perceptible as retronasal odour.
- Some individuals do not experience flavour from glucosides.
- The link between oral microbiota and release of aroma compounds from two glucosides during *in vitro* incubation with whole fresh saliva was investigated.

**16S rRNA gene sequencing of saliva**
- 363 types of bacteria identified (operational taxonomic units, OTUs)
- Bacteria grouped into two community types
- Microbiota stable over four weeks in cohort of 23 individuals

**In vitro saliva release of aroma compounds from glucosides**
- Saliva incubated with guaiacyl glucoside and geranyl glucoside in the laboratory
- Wide range of release, 2 - 99.9 %
- Higher saliva release correlated with higher *Prevotella* and lower *Streptococcus* abundance

Are oral microbiota the key to understanding why some people perceive flavour from glucosides and others don’t? Check out poster 96

Conclusion:
- Oral microbiota could be classified into two community types.
- Oral microbial community was highly correlated with *in vitro* saliva release of aroma compounds from glucosides.

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