



How mouth bugs make food tastier

GARGLING, sucking and spitting are the unsavoury actions that serious wine lovers say a proper tasting demands. But the full complexity of taste may come from something even more distasteful: mouth bugs. These bacteria help give us the rich flavours of wine, onions and peppers.

It has long been known that smell plays a big part in the perception of flavour, and Christian Starkenmann and his team at Firmenich, a flavour company in Geneva, Switzerland, had previously found that saliva can turn odourless sulphur-containing compounds from fruit and vegetables

into aromatic chemicals called thiols. Now they have shown that bacteria in saliva are responsible.

The team's sniffing panel could detect odours from the compounds only when extracts were dissolved in saliva. The aromas wafted up after 30 seconds and faded after 3 minutes (*Journal of Agricultural and Food Chemistry*, DOI: 10.1021/jf801873h).

At least one species of mouth bacteria, *Fusobacterium nucleatum*, is responsible for the conversion. The team showed this by adding the bacterium to otherwise sterile saliva containing the odourless starting substances. Only when the bacterium was added were the thiols created.

Starkenmann says the compounds could be used to flavour food.