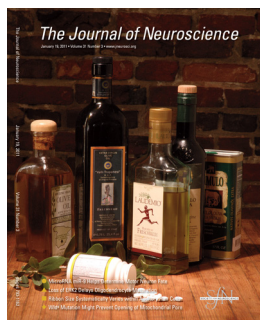


# The Journal of Neuroscience

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**Cover legend:** Extra-virgin olive oils stand behind an olive branch and a bottle of ibuprofen tablets. Most extra-virgin olive oils elicit a distinct pharyngeal irritation that is caused by the compound (–)-oleocanthal [2-(4-hydroxyphenyl)ethyl (3S,4E)-4-formyl-3-(2-oxoethyl)hex-4-enoate]. Oleocanthal shares this unusual oral sensory property with ibuprofen. Curiously, both compounds have similar anti-inflammatory profiles, inhibiting COX-1 and COX-2. The irritation profile of these compounds is caused by their high specificity for the nociceptive ion channel TRPA1, which in human upper airways is expressed in nociceptive neurons of the pharynx and the nasal epithelium. These compounds bind TRPA1 using a distinct process that differs from the covalent interactions seen with other TRPA1 irritants such as cinnamaldehyde and allyl isothiocyanate (AITC). Photo by Jon Perlmutter. For more information, see the article by Peyrot des Gachons et al. in this issue (pages 999–1009).

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