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Using spontaneous otoacoustic emissions to probe frequency selectivity

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PROPOSITIONS

Using spontaneous otoacoustic emissions to probe frequency selectivity

- (1) “The inner ear contains receptor cells that oscillate spontaneously, generating waves that propagate backward in the cochlea, ultimately causing sound to be radiated into the ear canal - the spontaneous otoacoustic emissions [...]” (*Norena et al., 2002*)
- (2) “OAEs are a functionless leakage of OHC ‘twitch energy,’ back to the ear canal.” (*David Kemp, ENT and Audiology News, May 2018*)
- (3) “Outer hair cells are not only detectors, but also generate force to augment auditory sensitivity and frequency selectivity.” (*Fettiplace and Hackney, 2006*)
- (4) “[...] although the basilar papilla itself is homologous between the [animal] groups, its specializations are not.” (*Köppl, 2015*)
- (5) “[...] the mammalian ear does not whistle because individual hair cells oscillate spontaneously; rather hair cells oscillate spontaneously because the ear whistles. [...]” (*Shera, 2003*)
- (6) “The whole is greater than the sum of its parts.” (*Aristotle*)
- (7) “I was taught that the way of progress was neither swift nor easy.” (*Marie Curie*)
- (8) Opening the box is essential to determine whether the cat is alive, dead or peacefully purring.
- (9) “Who knows nothing must believe everything.” (*Wilko Ahlrichs, at my first lecture in Oldenburg 2011*)

Sina Engler

Groningen, 8th of March 2023