

Stellingen behorend bij het proefschrift

***Caenorhabditis elegans* response to salt**

One of the pathways that mediates NaCl chemotaxis in *C. elegans* involves the guanylate cyclases GCY-14, GCY-22 and GCY-35, the cyclic nucleotide gated channel subunits TAX-2 and CNG-3, the $G\alpha$ protein ODR-3 and the transient receptor potential vanilloid subunit OSM-9 (this thesis).

A second pathway that mediates NaCl chemotaxis in *C. elegans* involves the guanylate cyclase GCY-22, the cyclic nucleotide gated channel subunits TAX-2 and TAX-4 and calcineurin (TAX-6 and CNB-1) (this thesis).

Gustatory plasticity involves desensitization of gustatory neurons and sensitization of nociceptive neurons during pre-exposure to NaCl (this thesis).

Desensitization of the gustatory neurons after pre-exposure to NaCl is at least partially non-cell autonomous and involves serotonin signaling (this thesis).

Sensitization of the nociceptive neurons after pre-exposure to NaCl is non-cell autonomous and requires input from the gustatory neurons and serotonin, dopamine, glutamate and neuropeptide signaling (this thesis and Hukema *et al.* 2008, *Learn Mem* 15(11): 829-36).

“If you want to understand the brain you’re going to have to take a reductionist approach, one cell at a time” - Harry Grundfest.

Recollection of experience in awake animals supports learning and memory-guided decision making – Jadhav *et al.* 2008, *Science* 336: 1454-1458.

Placebos induce the brain to release its own pain relieving chemicals and reduce the activity of pain-processing areas in the brain - Benedetti *et al.* 2005, *J Neurosci* 25:10390-10402.

The Great Barrier Reef at over 2000 kilometers in length is the longest and largest living structure on earth, because it is made up of billions of tiny coral polyps.

If we could drive a car straight up, we would be able to arrive in space in between one to two hours, depending on our driving speed.

A committee is a group that keeps minutes and loses hours – Milton Berle.

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