

## Propositions

### Molecular Mechanisms of Chemotaxis to Sodium Chloride in *Caenorhabditis elegans*

1. The GCY-22 containing cGMP signaling compartment at the ASER cilium tip is a sensitive NaCl detector (*this thesis*).
2. Intraflagellar transport maintains the ASER tip compartment (*this thesis*).
3. CHE-1 preferentially binds its own promoter, at the expense of binding to promoters of its target genes, allowing the CHE-1 genetic switch to overcome periods of low CHE-1 levels (*this thesis*).
4. *che-1* expression stability ensures ASE function over the lifetime of the animal (*this thesis*).
5. Stochastic gene expression can contribute to behavioural variation (*this thesis*).
6. *C. elegans* is a suitable model system to study various biological topics, including several human diseases (*Markaki & Tavernarakis, 2020. Curr Op Biotech 63:118-125*).
7. The cilium is a reaction tube for signaling proteins (*Nachury, 2014. Phil Trans R Soc B 369(1650), 20130465-20130465*).
8. The cilium is an antenna that receives and sends signals (*Wang & Barr, 2018. Essays Biochem 62(2), 205-213*).
9. Under carefully controlled experimental circumstances, an animal will behave as it damned well pleases—Harvard law of animal behavior (*Maye et al., 2007. PLoS ONE 2(5), e443*).
10. Physics and biology collaborate to color the world (*Liu, 2013. CBE-Life Sci Edu 12(2), 133-138*).
11. Alles is een tussenstand (*een oude wijze man*).