Q: What does “hedonic value” mean?

Q: What is gustatory?

Q: How is data taken in morphological and electrophysiological recordings?

Q: What does the Intrinsic Signal Optical Imaging technique exactly measure on the brain?

Q: If most electrophysiological recordings are performed on anesthetized animals, doesn’t this mean that if the same tastant experiments were conducted when the animals are awake that results could be different and produce a different outcome? How do researchers combat this?

Q: Is gustatory processing in the periphery considered to be more or less complex in terms of evolution than gustatory processing contained within the CNS?

Q: What are the main functions of each part of the tongue - in relation to organizing and categorizing tastes?

Q: Neurons that are labelled ‘best receptors’ can change their tastant selectivity during, or after ingestion? - what does that mean?

Q: What is a synthetic and normally tasteless ligand? This is in relation to the quote from the article “For example, in mice expressing a receptor activated by a synthetic and normally tasteless ligand in bitter-responsive cells the ligand was found to induce avoidance behavior, whereas when the same receptor was expressed in sweet-responsive cells the ligand provoked acceptance behavior.”

Q: What is the thing that activates the transient receptor channel, the IP3-reduced, and what is its function?

Q: Why doesn’t the firing rate decrease for blackcurrant juice?

Q: Can the separate pathways be simultaneously activated? (e.g. bitter and sweet).

Q: What are the major similarities and differences between taste codes and the way the taste signals travel?

Q: What does the article mean by the phrase “neuronal spike timing”?

Q: What does the article mean when it says “gustatory pathways in the brain consist of interacting and dynamic feed-forward and top-down pathways”? More specifically, I am not sure how the feed-forward and top-down pathways come together.

Q: What is a segregated pathway?

Q: What is the difference between labeled line and ensemble code?

Q: Why does the temporal response need to be able to distinguish between two tastes more specifically than the broadly tuned neuron if the overall purpose is to distinguish between harmful and helpful substances? Based on Page 5 of the PDF, “Coding in the brainstem and thalamus”.

Q: What exactly is the role of the 'pontine parabrachial nucleus (PBN)', and specifically, how does it project signals to the various areas of the brain used in "feeding and/or taste memory formation"

Q: What does "taste maps for saccharin are plastic" mean?

Q: What is chemotopic organization? [[https://www.zotero.org/google-docs/?p4TPl5|(Binder, Hirokawa, & Windhorst, 2009)]]

Q: What type of graph is a "topographical representation"?

Q: What role does the somatosensory system play in the analyzing different types of food?

Q: can we point of the area in the brain in Mango where gustation occurs? [[https://www.zotero.org/google-docs/?yHvNcF|("Gustatory Cortex," n.d.)]]

Q: Why does the temporal response need to be able to distinguish between two tastes more specifically than the broadly tuned neuron if the overall purpose is to distinguish between harmful and helpful substances? Based on Page 5 of the PDF, "Coding in the brainstem and thalamus".

Q: Do people get a similar memory recall from taste as people do with scent? Or are they different in that regard?

Q: How do you gain or lose the different types of TRCs? For example some people like salt more than others, or have an acquired taste for bitter things, do they have more type II TRCs, or G-protein coupled receptors?

Q: If most electrophysiological recordings are performed on anesthetized animals, doesn't this mean that if the same tastant experiments were conducted when the animals are awake that results could be different and produce a different outcome? How do researchers combat this?

Q: Is the gustatory system and the somatosensory system the only thing involved in analyzing food features?

Q: Why does the peripheral gustatory processing have a much simpler mechanism over the central nervous system gustatory processing?

Q: Do people like sour candies (even though sour tastes are generally unpleasant) because the sweet flavor overpowers the sour? So why do some prefer sour candy over other candy?

Q: With so much biological and evolutionary support for how and why human gustation works the way it does, why do humans still find food that is very unhealthy, and that the body does not need, so appealing?

Q: Under the assumption that taste preferences change with age, especially considering differences between children and adults (like how most kids normally hate the taste of vegetables that adults may otherwise enjoy), how does the taste encoding differ in children versus adults? Does associative learning play a larger role in one group versus the other?

Q: Why is it that some medicine injections to other areas of the body result in a patient tasting

something?

Q: Does the release of neurotransmitter dopamine playing into the frontal cortex and reward value?

Q: Can this science be used to help with dieting or health benefits? Reduce the type II TRCs that respond to sweets, or reduce the ENaCs to reduce attraction to salt for those with high blood pressure?

Q: I wonder how the sensory-specific satiety in the OFC would be affected by people with eating disorders. With binge eating disorder, people eat much more past the point of simply gaining nutritional value, or with anorexia, people don't eat nearly enough. However, people with both kinds of disorders are somehow satisfied with their abnormal eating habits. Is this a change that affects the OFC or is it more strictly psychological?

Q: can certain types of brain trauma affect the functioning of the gustatory system?

Q: How would future experiments delve into the other parts of the food stimulus?