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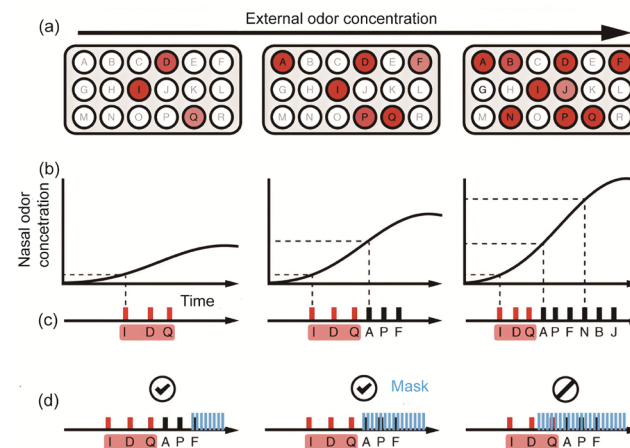
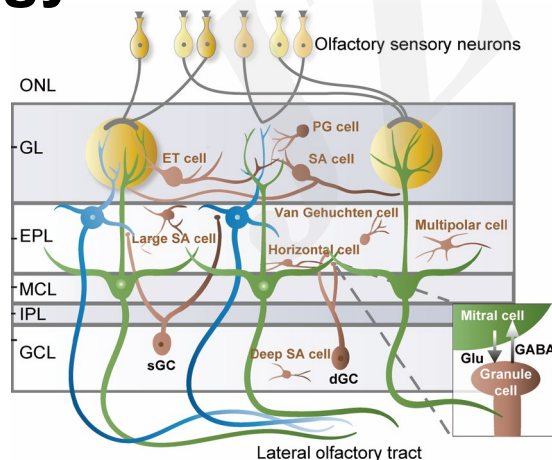
Odor representation and coding by the mitral/tufted cells in the olfactory bulb

Key words: Olfactory bulb; Mitral/tufted cells; Odor identity; Neural representation; Information encoding

Research Summary

This review focused how the neurons and circuits in the OB represent odor information, and summarized the key features of different coding strategies, including:

- Neuronal and circuit bases for odor representation in the OB.
- How the spatial coding strategy represents odor information.
- The advantages and application of temporal coding strategy.



Innovation points

- **Introduction** of the importance of the OB as a crucial center for odor representation and coding in the olfactory system.
- **Summary** of the neuronal and circuit bases for odor representation in the OB.
- **Emphasis** of details of how spatial and temporal coding strategies represent odor information in the OB.

Innovation points

A series of comprehensive figures were generated to summarize the neural bases and odor representation strategies in the OB.

Figure 1 | Illustration of anatomical basis for spatial coding in the OB

Figure 2 | Schema of OB circuit modulation by cortical feedback and centrifugal neuromodulators.

Figure 3 | Diagram showing the electrophysiological signals recorded in the OB.

Figure 4 | Example of how temporal information from OB represents odors.

Figure 5 | A schematic diagram illustrating primacy coding of odor identity.