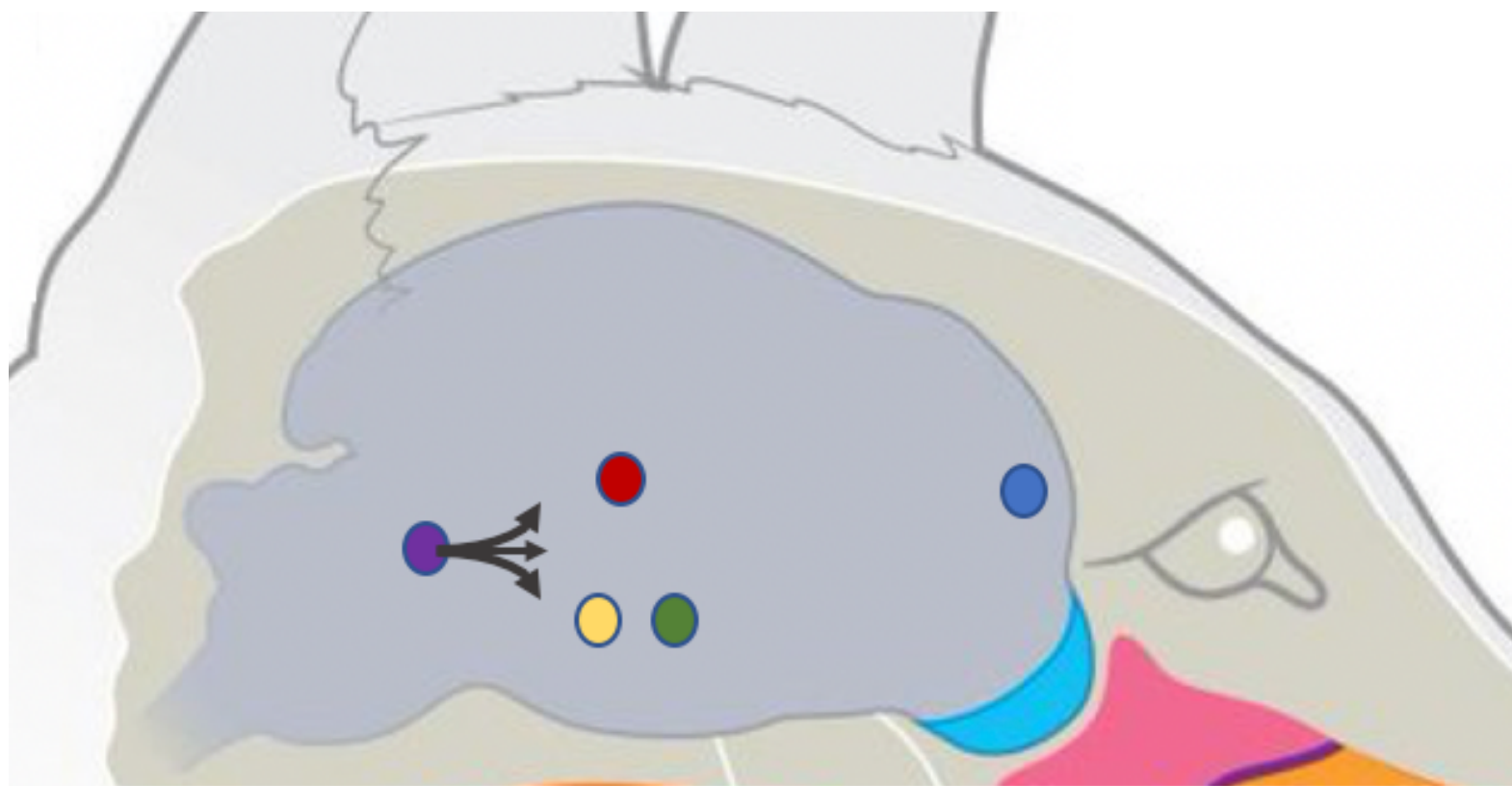
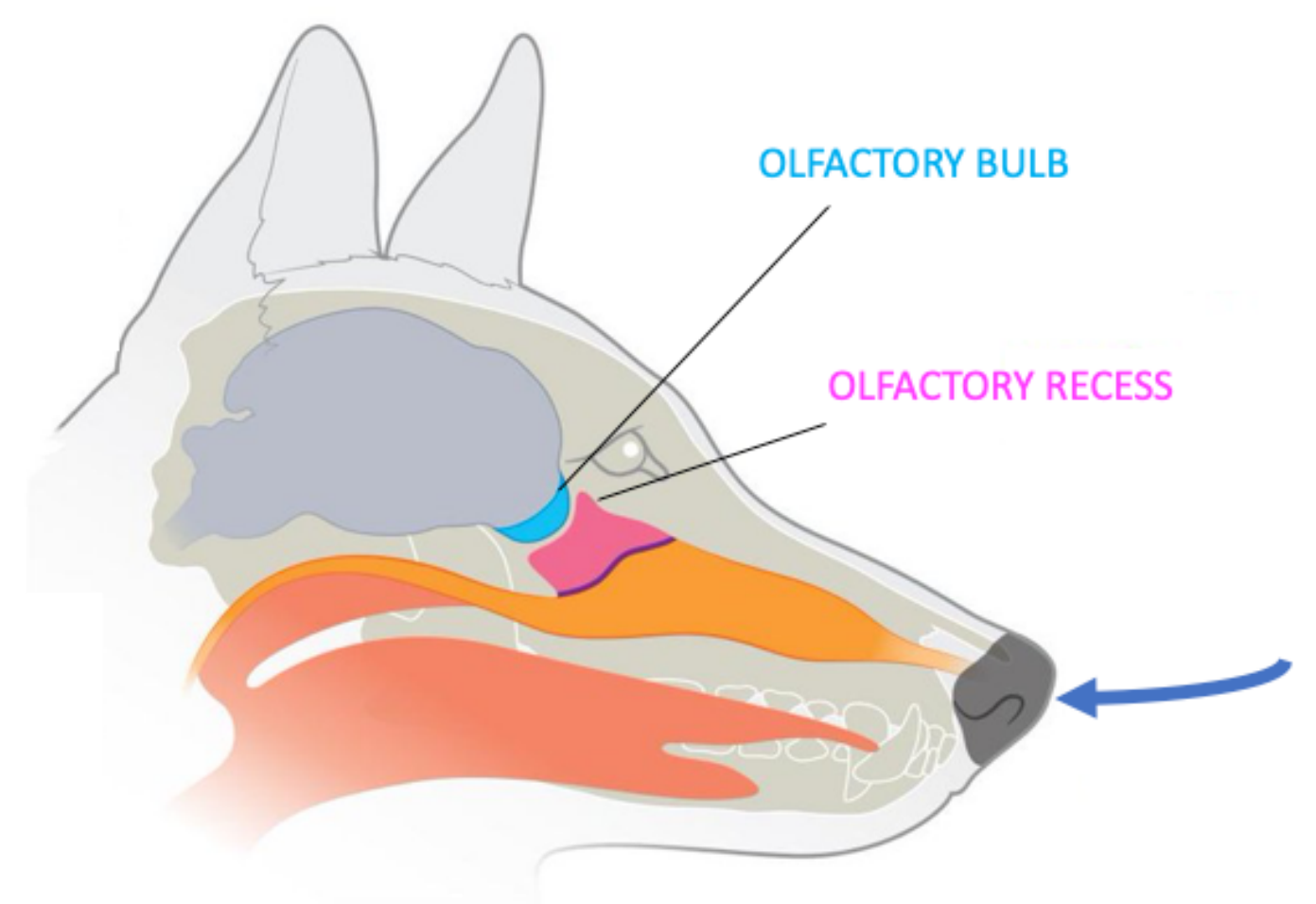


# THE NOSE KNOWS: A BRIEF LESSON ON CANINE OLFACTION



Air is **EXHALED** through the sides of the nose, so it doesn't dilute the odour carried in the **INCOMING AIR**.

**INCOMING AIR** circulates in the nose, and odour is temporarily trapped in the **OLFACTORY RECESS**. The **OLFACTORY BULB** relays the information to complex circuits of other brain areas.



If dogs are given a reward after they smell an odour and make an indication, a substance called dopamine travels from the **VENTRAL TEGMENTAL AREA** to other brain areas. The **NUCLEUS ACCUMBENS** and the **AMYGDALA** are involved in connecting emotions to the environment.

Dopamine is also released at the **PREFRONTAL CORTEX**, which helps to focus attention, and at the **HIPPOCAMPUS**, which helps to form memories. So, the dog starts to connect the odour and its own behaviour with getting a reward -- the brain is saying, "This was good; let's do it again!"