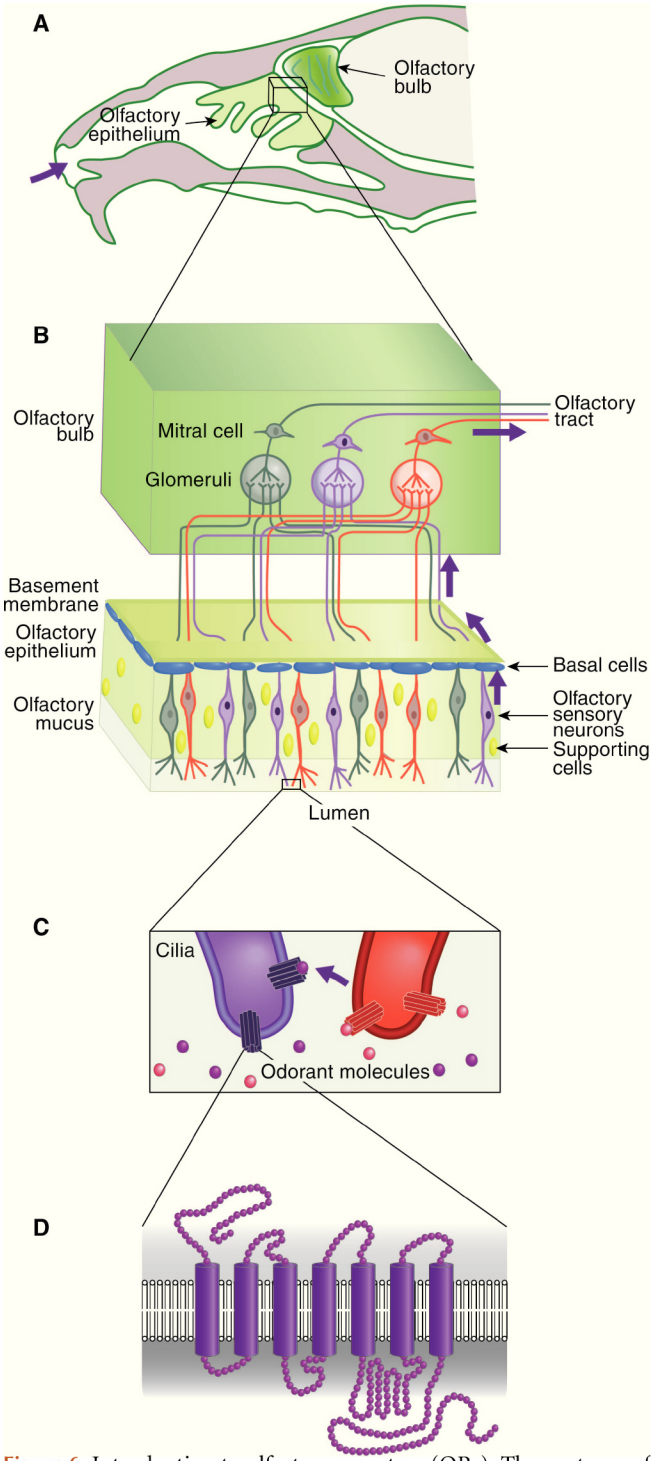

Figure 6. Introduction to olfactory receptors (ORs). The anatomy of the olfactory system is shown in increasing degrees of magnification from *A* to *D*, down to the depiction of ORs, which are G-protein-coupled receptors with seven transmembrane α-helices (*D*). Purple arrows throughout indicate the pathway of olfactory system transduction from the entrance of odorant molecules into the nasal cavity (*A*), their binding to ORs (*C*), and transduction of the signal through the olfactory system (*B*). (*A*) Head cross section in the mouse, indicating the olfactory tissues containing OSNs. The MOE is the olfactory sensory organ containing OSNs, basal pluripotent cells (blue), and sustentacular supporting cells (yellow nuclei). Each OSN expresses one type of OR (three types illustrated for simplicity as green, red, and purple) and the axons of OSNs expressing the same OR project to the same glomerulus in the olfactory bulb in which they synapse with interneuron/mitral cells to transmit the signal to the brain. Glomeruli map spatially into zones based on similarity of OR characteristics. (*C*) Enlargement of OSN cilia, depicting the single type of OR (red or purple), which binds a particular type of odorant molecule. (*D*) Structure of the seven transmembranes spanning the OR.