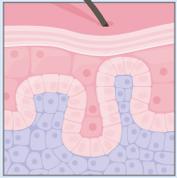


SMELL

Originally thought to be present only in the nose, olfactory receptors exist in many locations in the body, including in the skin, heart, lungs, kidneys, muscles, and sperm. They are involved in a variety of functions, from regulating blood pressure to enhancing muscle and skin regeneration.



SKIN

A synthetic sandalwood odorant activates olfactory receptors in the skin, causing epidermal cells to migrate and

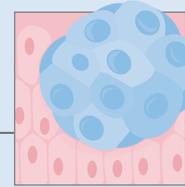
proliferate faster, which enhances regeneration and wound healing.



SPERM

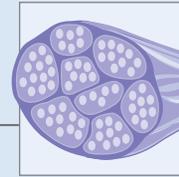
Olfactory receptors in sperm cause them to be attracted to the synthetic scent of lily of the

valley flowers. These receptors could play a role in guiding sperm towards the egg, although the receptors' natural ligand in the body is still not known.



CANCER

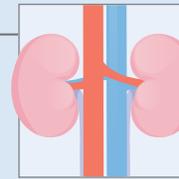
Olfactory receptors are highly expressed in many different types of cancer cells, and stimulating these receptors can cause tumors to shrink in cell culture.



MUSCLE

The same olfactory receptor found in sperm is also found in the muscles of mice, where it directs muscle migration by attracting muscle cells toward

a particular scent. Overexpressing this receptor improves regeneration, and without it muscle fibers are more prone to injury.



KIDNEY

Short-chain fatty acids produced by gut bacteria can activate an olfactory receptor found in mouse kidney cells, resulting in changes

in blood pressure. This receptor may act in conjunction with a nonolfactory receptor to buffer against swings in blood pressure as fatty-acid levels fluctuate.