Human olfactory that is expressed in both the olfactory epithelium and in the sperm where it mediates olfactory sensitivity to the compound bourgenal. This is an important compound in chemotaxis. Olfactory receptor also play important roles in sperm chemotaxis. One the the olfactory receptor is OR1D2. Bourgenal is a important ligand of this olfactory receptor OR1D2. Bourgeonal is an aromatic aldehyde used in perfumery. It has a fragrance reminiscent of Lily of the Valley (Convallaria majalis).

Bourgeonal is the only known odor substance to which males have a higher average sensitivity than females. Olfactory receptor (OR1D2) is expressed both in non-olfactory tissue in sperm cells and in the olfactory tissue of the nose. This causes sperm chemotaxis causes a sexual selection in males that causes them to have more OR1D2 receptors on average, both in the nose as well as in sperm. Therefore, new ideas can make new treatment trends in infertility. This substance can be used in culture medias of assisted reproductive techniques or a supportive treatment of unexplained infertile couples.