Name: Akintunde Dolapo Ayomide.

Matric no: 18/mhs02/033.

Level/Department: 200L/Nursing.

Course Code: PHS 212.

QUESTION.

ELUCIDATE THE PATHWAY INVOLVED IN TASTE.

RECEPTORS.

Receptors for taste sensation are the type III cells of taste buds. Each taste bud is Innervated by about 50 sensory nerve fibers and each nerve fiber supplies at least five taste buds through it's terminals.

- **FIRST ORDER NEURON.**

First order neurons of taste pathway are in the nuclei of three different cranial nerves, situated in medulla oblongata. Dendrites of the neurons are distributed to the taste buds. After arising from taste buds, the fibers reach the cranial nerve nuclei by running along the following nerves.

1. **Chorda tympani fibers** of facial nerve, which runs from anterior two third of tongue.

2. **Glossopharyngeal nerve fibers, w**hich run from posterior one third of the tongue.

3. **Vagal fibers,** which run from taste buds in other regions.

Axons from first order neurons in the nuclei of these nerves run together in medulla oblongata and terminate in the nucleus of **tractus solitarius.**

- SECOND ORDER NEURON.

Second order neurons are in the nucleus of tractus solitarius. Axons of second order neurons run through **medial lemniscus** and terminate in **posteroventral nucleus** of thalamus.

- **THIRD ORDER NEURON.**

Third order neurons are in the posteroventral nucleus of thalamus. Axons from third order neurons project into **parietal lobe** of the cerebral cortex.

- **TASTE CENTER.**

Center for taste sensation is in opercular insular cortex, i.e. in the lower part of postcentral gyrus, which receives cutaneous sensations from face. Thus, the taste fibers do not have an independent cortical projection.

- **PRIMARY TASTE SENSATIONS.**

Primary of fundamental taste sensations are divided into five types:

1. Sweet.

2. Salt.

3. Sour.

4. Bitter.

5. Umani.

Man can perceive more than 100 different tastes. Other taste sensations are just the combination of two or more primary taste sensations.