

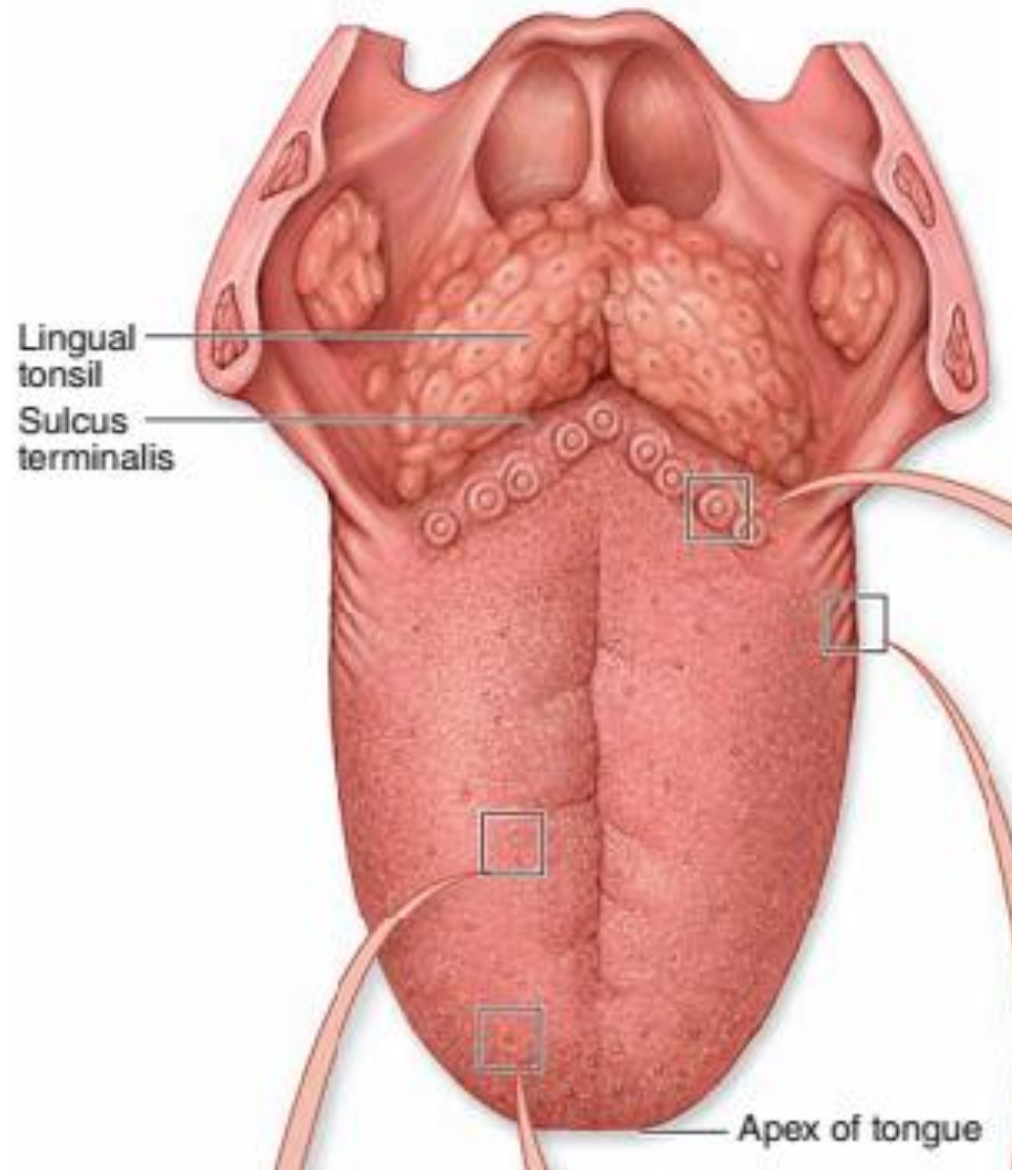
# HISTOLOGY OF TONGUE BY

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A.P ANATOMY DEPT KGMC

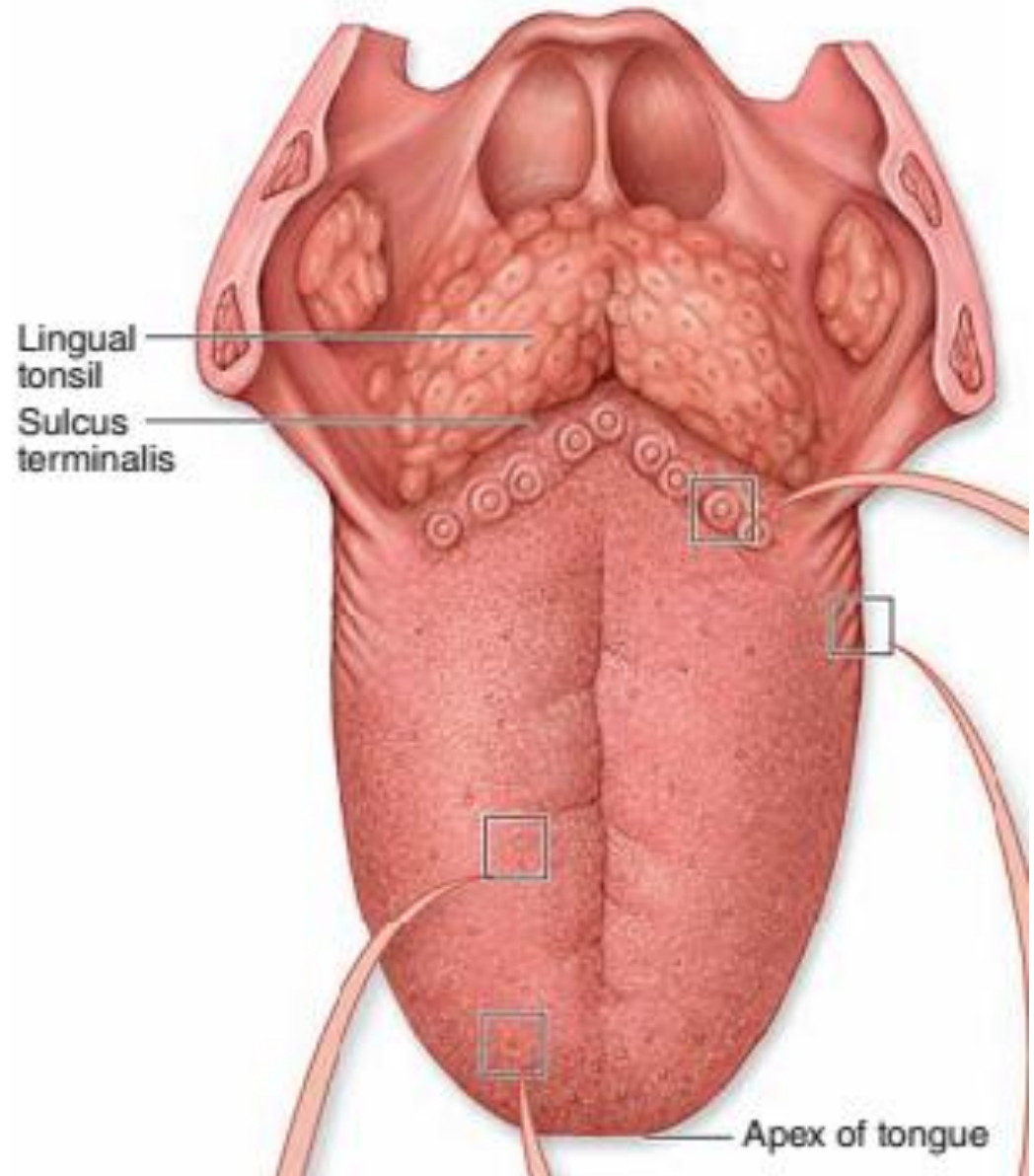
# Tongue

- Tongue is a mass of striated muscle
- covered by mucosa.
- which manipulates Ingested material during mastication and swallowing.
- The muscle fibers are oriented in all directions, allowing a high level of mobility.



# Tongue

- Connective tissue between the small fascicles of muscle is penetrated by the lamina propria
- Which makes the mucous membrane strongly adherent to the muscular core.
- The lower surface of the tongue is smooth, with typical lining mucosa.

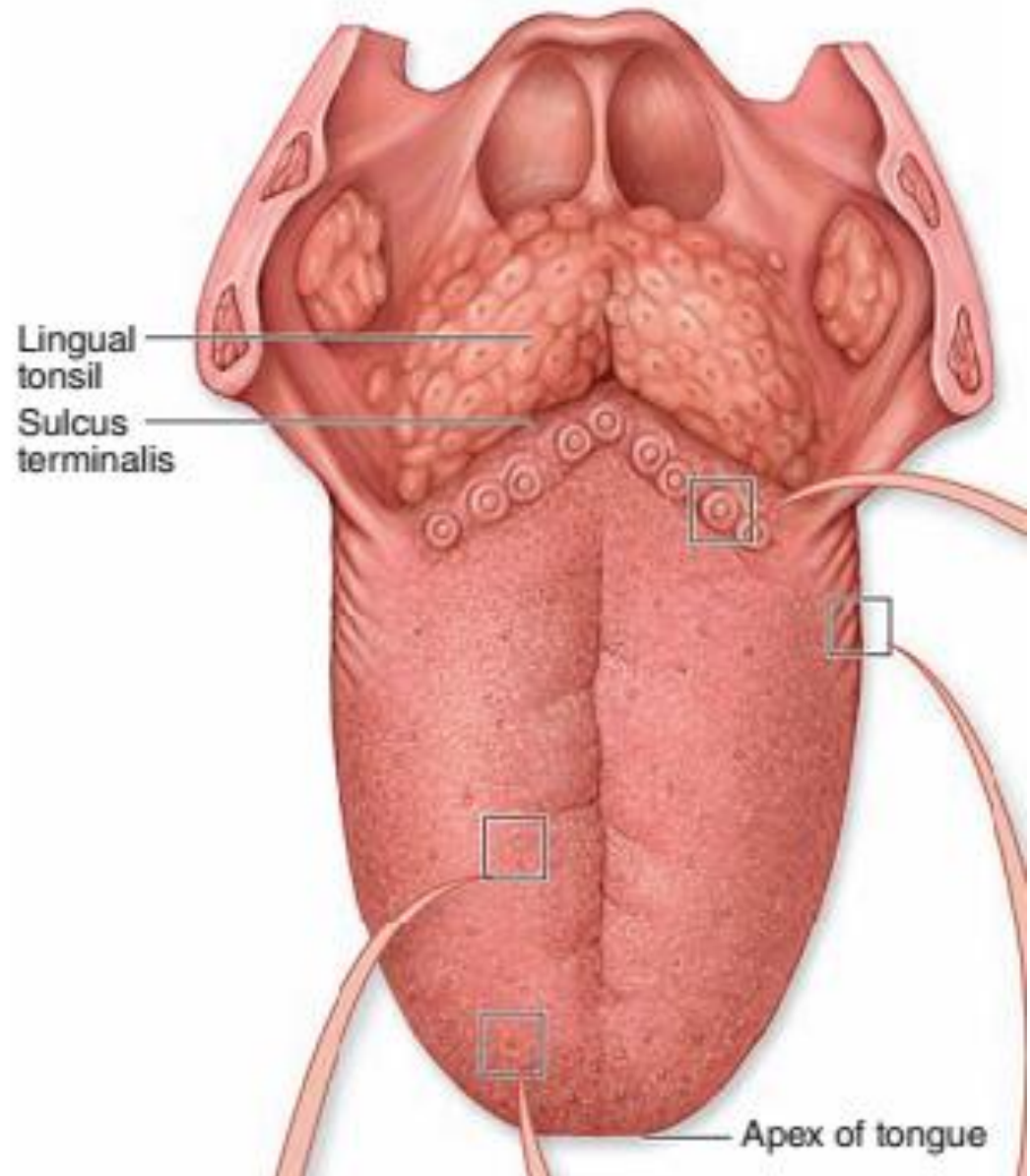


# Tongue

- Dorsal surface is irregular
- Having hundreds of small protruding papillae of various types on its anterior two-thirds .

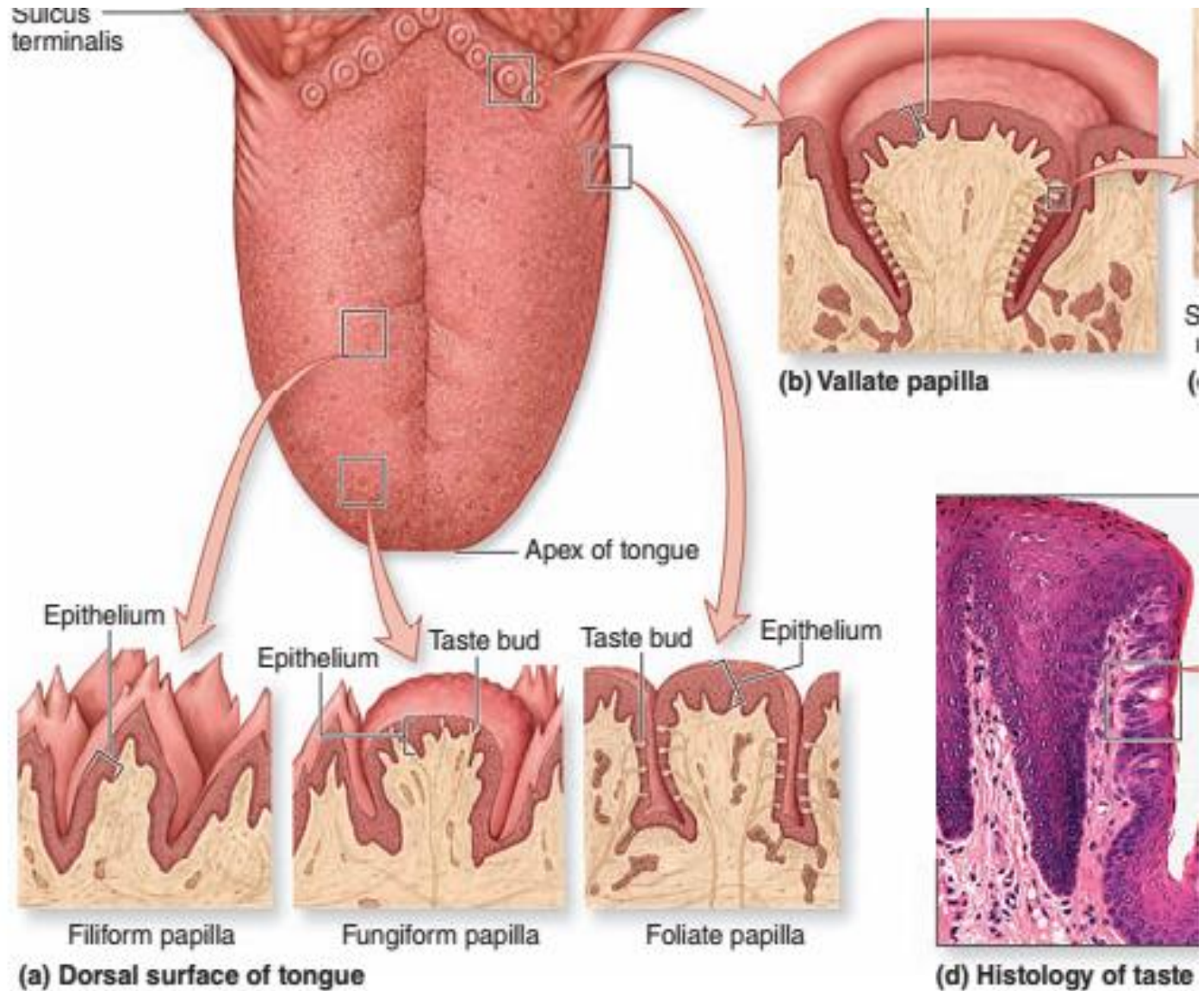
## Massed of lingual tonsils :-

- Present on the posterior third, or root of the tongue .
- Tonsillar areas of the lingual surface are separated by a V-shaped groove called the sulcus terminalis.



# Four types of papilla

- Are elevations of the mucous membrane

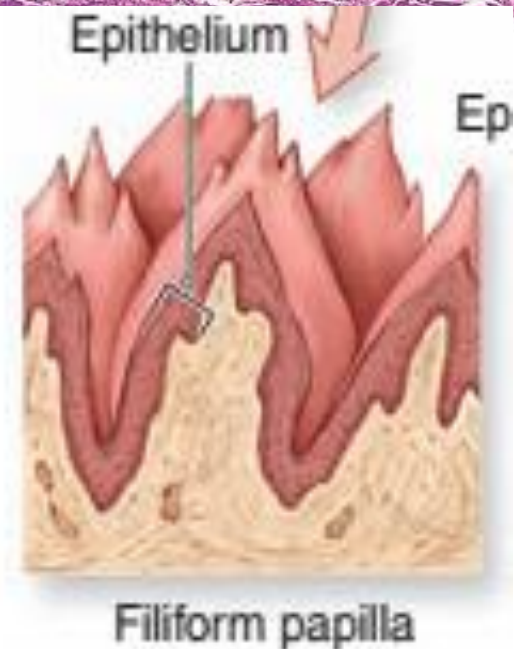
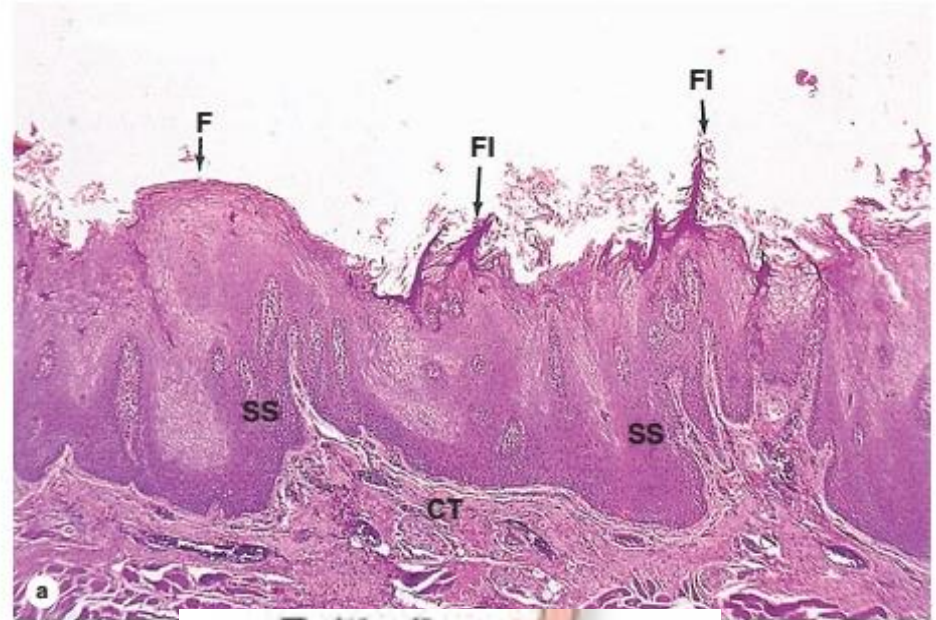


# Filiform Papillae

■ Filiform papillae are very numerous

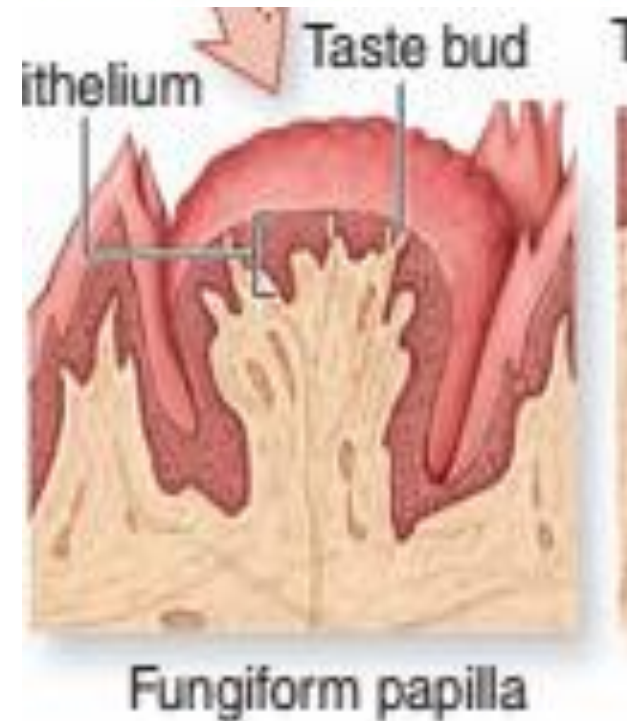
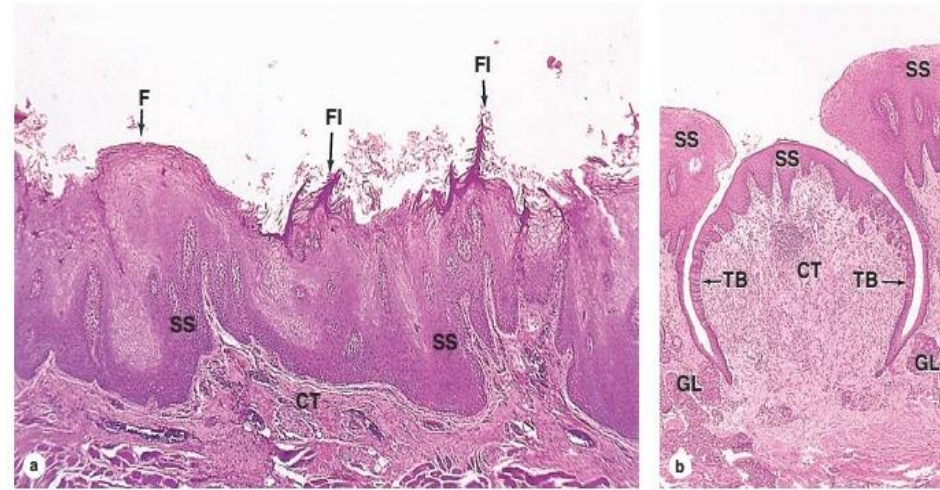
## Feature are:

- An elongated conical shape and are heavily keratinized.
- Which gives their surface a gray or whitish appearance.
- They provide a rough surface
- That facilitates movement of food during chewing.



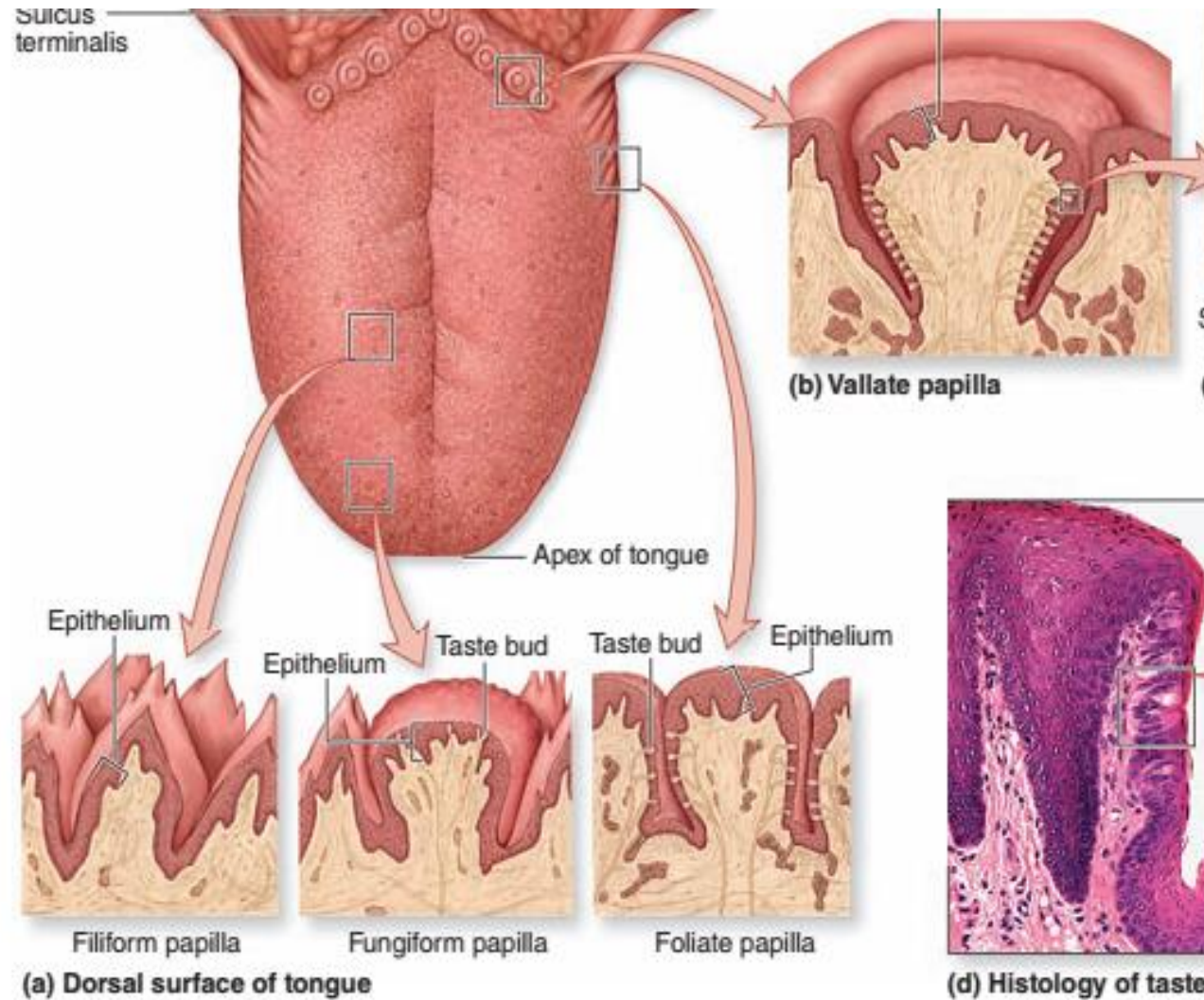
# Fungiform papillae

- Are much less numerous
- Lightly keratinized
- And interspersed among the filiform papillae.
- They are mushroom-shaped with well-vascularized and innervated cores of lamina propria.



# Foliate papillae

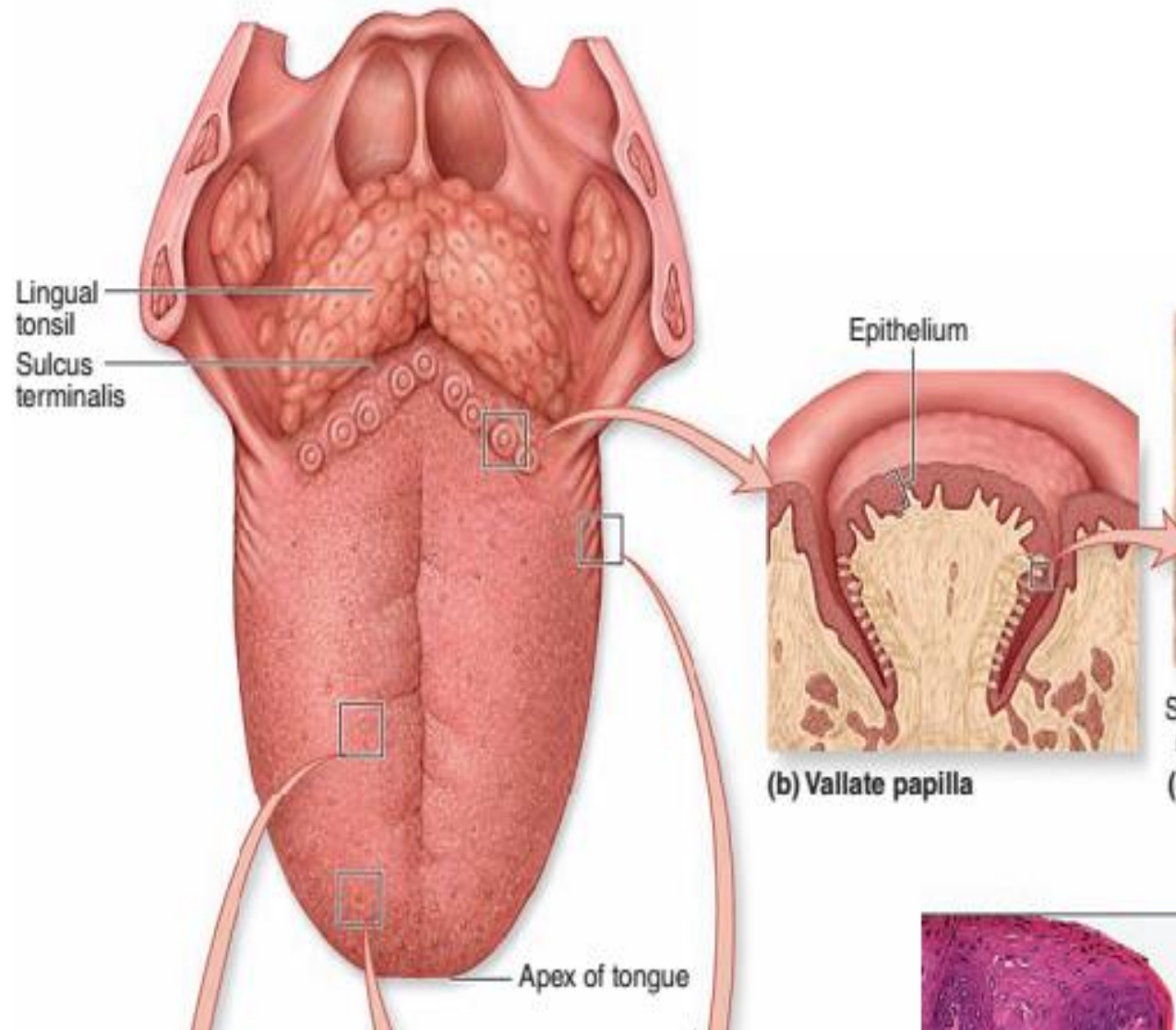
- Consist of several parallel ridges on each side of the tongue, anterior to the sulcus terminalis.
- But are rudimentary in humans, especially older individuals





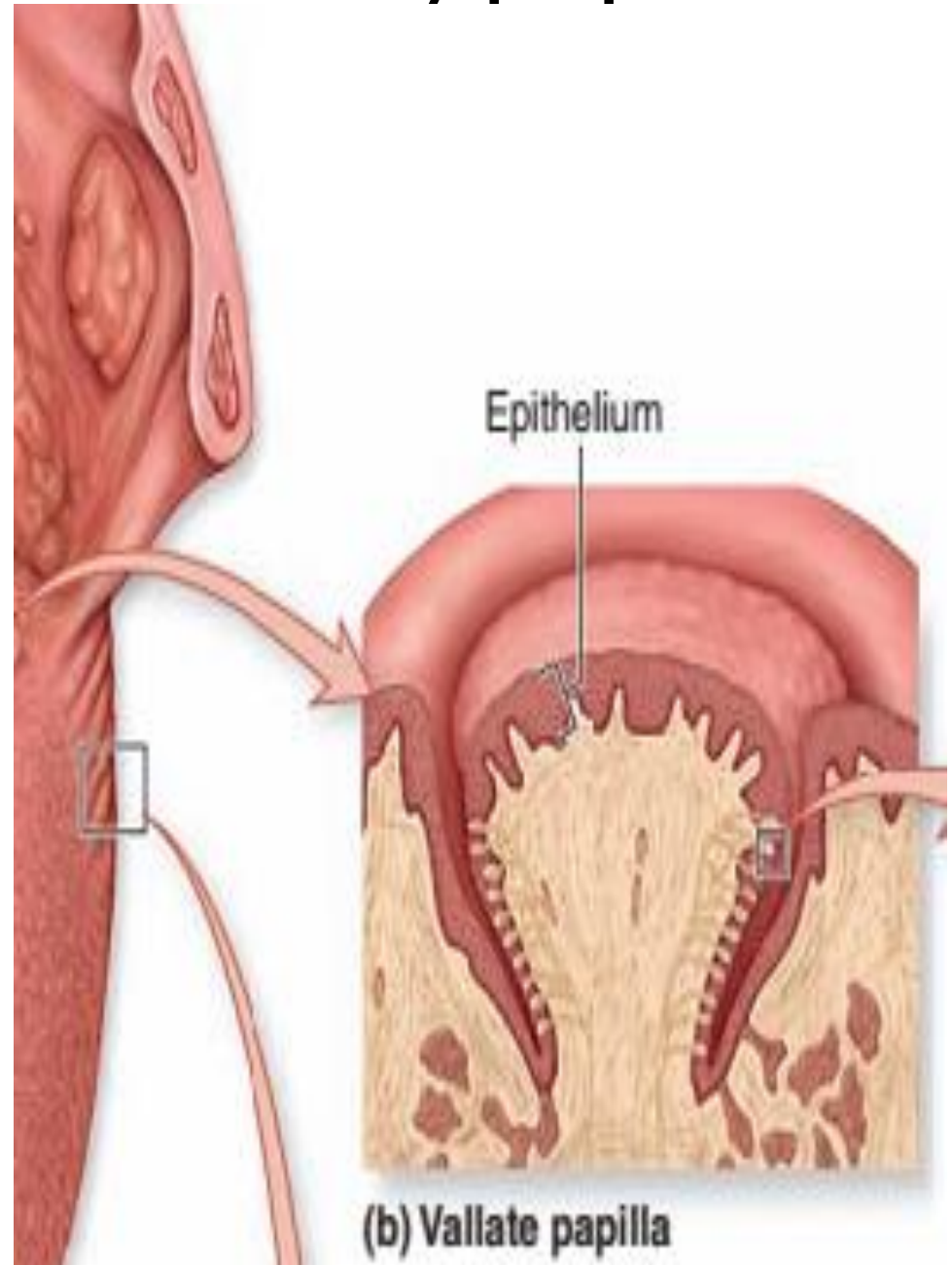
# Vallate (or circumvallate) papillae

- Are the largest papillae.
- With diameters of 1 to 3 mm.
- Eight to twelve vallate papillae are normally aligned just in front of the terminal sulcus.



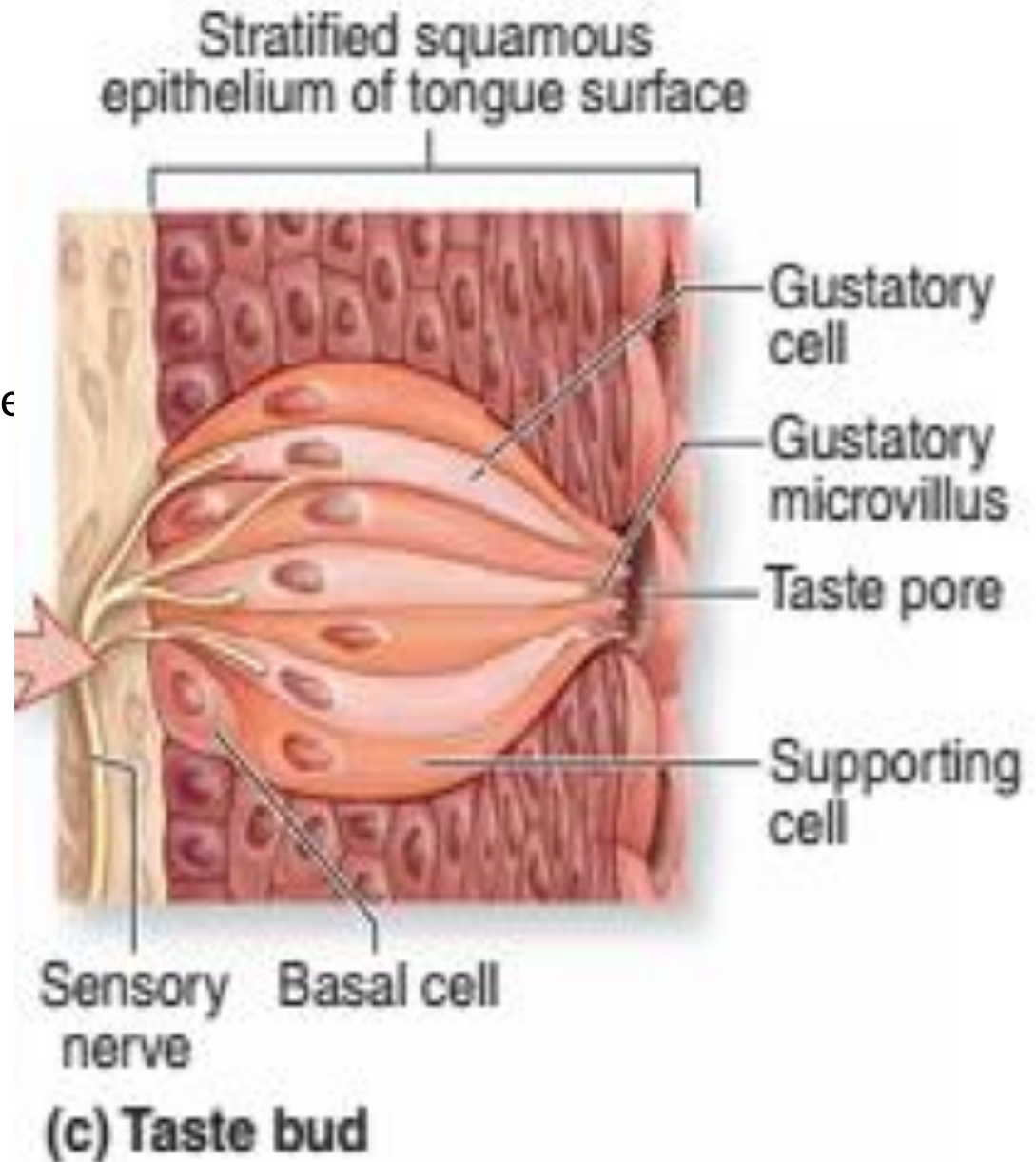
# Vallate (or circumvallate) papillae

- Ducts of several small, serous salivary (von Ebner) glands empty into the deep, groove surrounding each vallate papilla.
- This provides a continuous flow of fluid over the taste buds
- That are abundant on the sides of these papillae.
- Washing away food particles so that the taste buds can receive and process new gustatory stimuli.
- Secretions from taste buds contain a lipase.
- That prevents the formation of a hydrophobic film on these structures that would hinder gustation



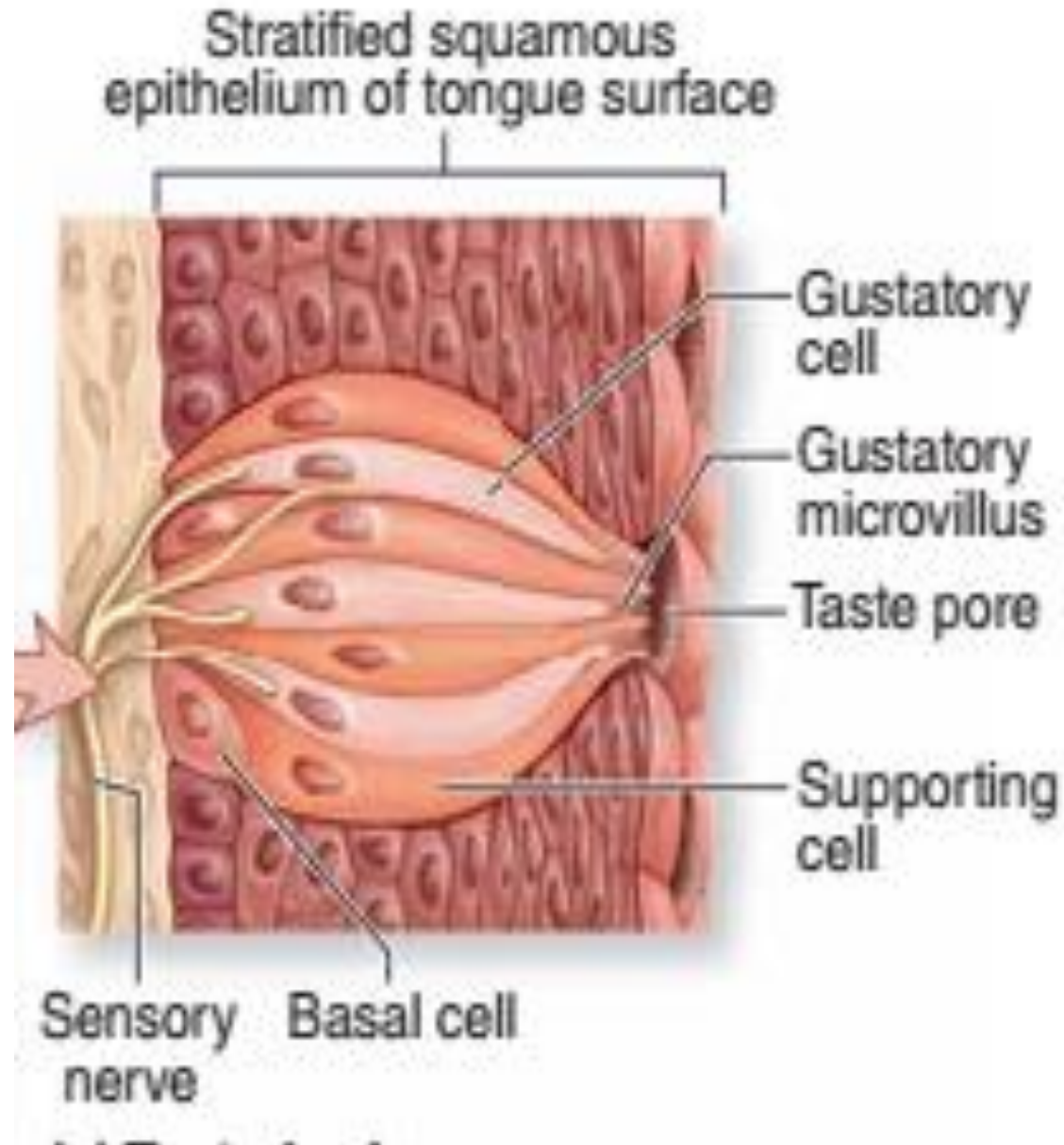
# Taste buds

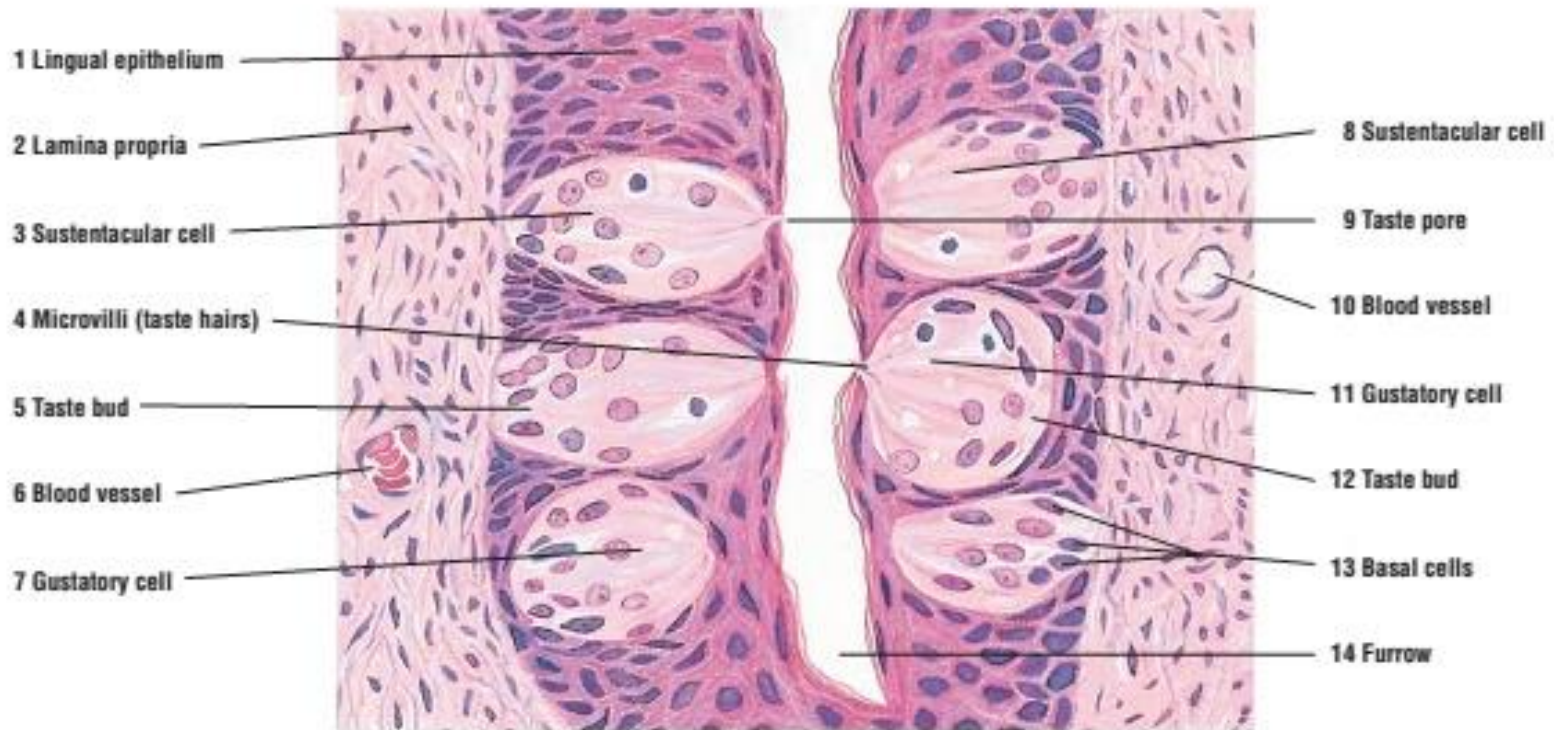
- Taste buds are ovoid structures within the stratified epithelium on the tongue's surface,
- Approximately 250 taste buds are present on the lateral surface of each vallate papilla,
- With many others present on fungiform and foliate (but not the filiform papillae.)
- They are not restricted to papillae.
- And are also widely scattered elsewhere on the dorsal and lateral surfaces of the tongue.
- Where they are also continuously flushed by numerous minor salivary glands



# Taste buds

- The base of each bud rests on the basal lamina
- And is entered by afferent sensory axons
- that form synapses with the gustatory cells.
- At the apical ends of the gustatory cells, microvilli project toward a 2-  $\mu\text{m}$ -wide opening in the structure called the taste pore.
- Molecules (tastants) dissolved in saliva contact the microvilli through the pore and interact with cell surface taste receptors





Thank you