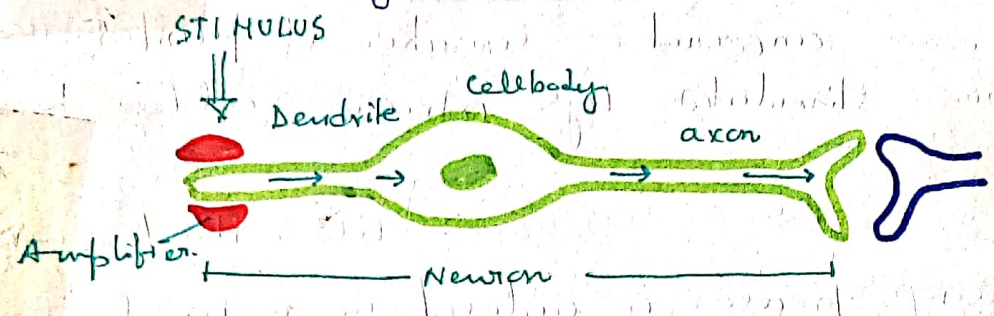


SENSORY RECEPTOR

A sensory receptor is a neurone composed of dendrites that include tissue that amplifies the stimulus. It is a transducer that transform the stimuli into the electrical impulse that spread to the cell body & along its axon to the other neurones usually in CNS.

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Guria
①



A tissue innervated by sensory neurone fibre called Sensory organ.

Classification :-

Somatic Sensory receptor - present in extremities of body eg - skin, body surfaces, extremities.

visceral Sensory receptor - present in visceral organ.

Extero receptor - receive stimuli or sensation from external environment.

Intero receptor - Receive stimuli from internal organ.

Proprio receptor - specialized type of intero receptor. located in skeletal muscle. called stretch receptor. Imp in terrestrial vertebrate help in movement.

General sensory receptor - widely distributed throughout the body, functionally not specialized. it is of 3 types -

1. **Free sensory receptor** - when the terminus of sensory process lack any specialized association called free nerve ending or free sensory receptor.

special sensory receptor: -

They are localized. they are restricted to specific stimuli. They are -

1. Chemoreceptor.
2. Mechanoreceptor.
3. Radiation receptor.
4. Electroreceptor.

These are all responsible for -

- i) Reproduction.
- ii) Food capture.
- iii) Avoidance from predation.

1. Chemoreceptor → Receptor sensitive to chemical stimuli. eg - olfactory receptor, taste receptor.

distant chemoreceptor → source of stimuli present in distant from the receptor. eg olfactory.

contact chemoreceptor - source of stimuli must be in direct contact of receptor - taste bud.

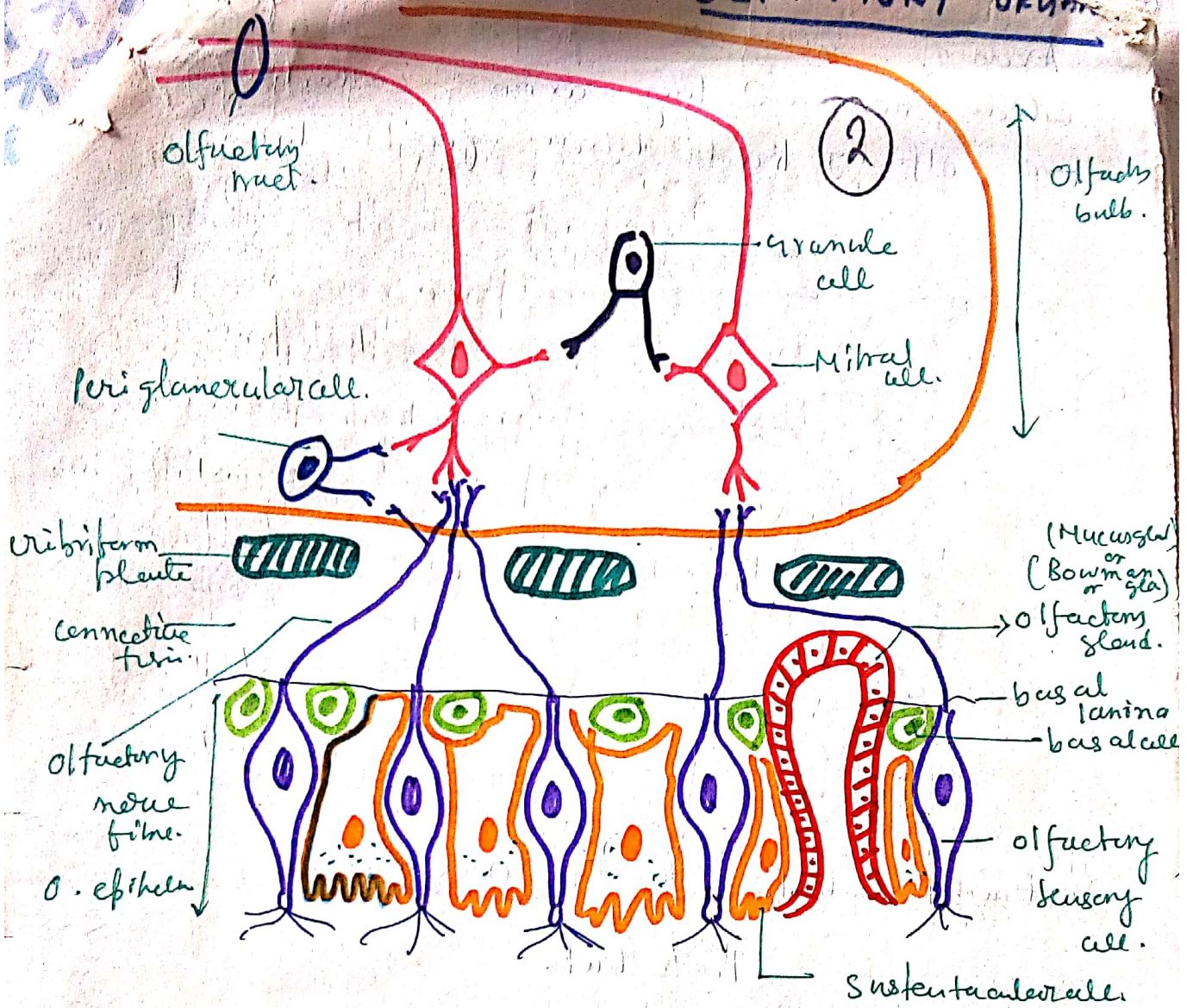
Macrasmatic Animal - vertebrate is well developed olfactory sys. for catching prey. eg - ungulate, carnivore, Rodent.

Microsmatic Animal - olfactory system is not well developed. eg - birds, Primate, balear whale.

Anosmatic Animal - No olfactory system eg - toothed whale.

Accessory olfactory system - Vermor vomeronasal organ or Jacobson's organ highly developed in lizard, snake, also in amphibian. rudimentary in Man.

OLFACTORY ORGAN



The chemoreceptor involved in olfaction is located in nasal passage.

- It is div. into
- (a) olfactory epithelium
 - (b) olfactory bulb.
 - (c) olfactory tract.

(a) olfactory epithelium contains 3 types of cell.

- (i) olfactory sensory cells. —
- (ii) each has sensory cilia to its apical end & basal end send an axon through cribriform plate into o. bulb.

These axons are grouped — o. nerve

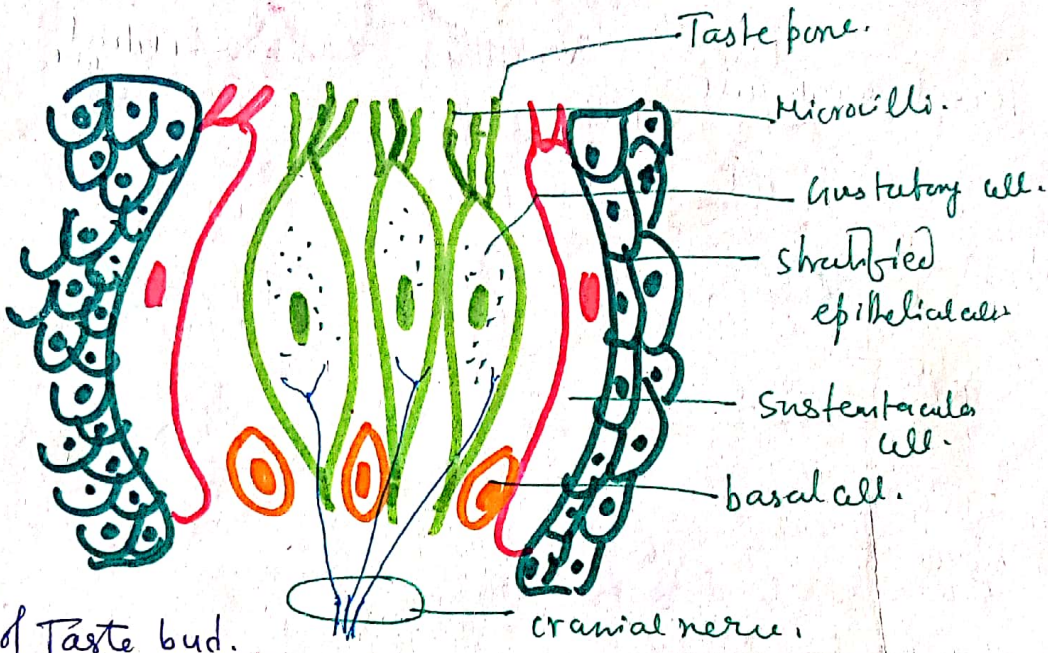
- (ii) sustentacular cells (support o. sensory cells)
- (iii) basal cells → replacement cells.

(b) O. bulb → (a) Mitral cell (b) Granule cell (c) Periglomerular cell

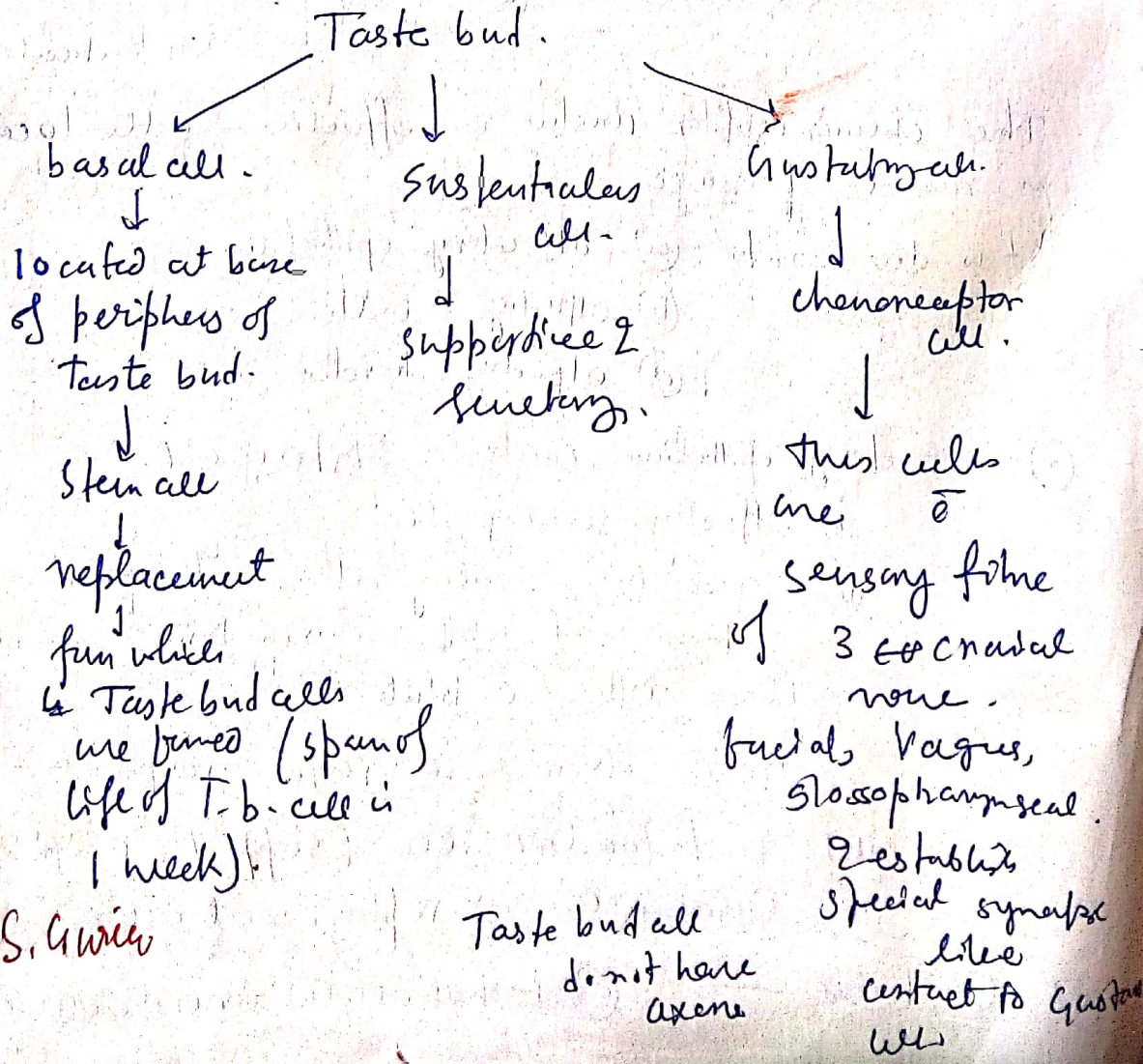
Axon of sensory cell synapse with microvilli which form taste pore collectively for olfactory tract which goes to brain.

TASTE BUD

(3)



Section of Taste bud.



S. Guria