

# Lecture 4 – Chordates

Chordates are animals that exhibit certain characteristics.

## 1. Notochord:

- Supporting rod that runs through the length of the body.
- Plays a fundamental role in the development of the overall vertebrate structure of the animal.
- Supports the growth and development of the bone and cartilage structure.

## 2. Nerve Cord:

- A hollow supporting structure that runs along the dorsal (top side) of the animal.
- Framework for the central nervous system, wherein *neurons* (Cells that transmit electrical messages) are transmitted.

## 3. Pharyngeal slits:

- Opening slits between the pharynx (near to throat) and the exterior of the chordate.
- For certain chordates, this is used for gas exchange, while others use it to filter food particles from water.

## 4. Post-Anal Tail:

- Extension of the body that runs through the anal passage.

## 4.1 Nonvertebrate Chordates

### Tunicates

- **Tunic:** Stable, flexible body covering.
- They attach themselves to rigid objects like rocks or coral.
- **Oral Siphon:** The siphon by which they draw seawater through their bodies.
- **Branchial Basket:** The filtering system within their bodies used to filter oxygen and food particles contained in the water that they consume.
- **Atrial Siphon:** Remains of the filtering process are expelled through this siphon.

**Examples:** Larvae, Ascidians.

## Cephalochordates

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