

## Unit 11:

# Base of the brain and cranial nerves

## Chapters 7 and 9 (Head and cranial nerves) and lecture/seminar material

### GENERAL OBJECTIVES:

- Understand the organization of the brainstem.
- Understand how the 'inner structures' (nuclei, tracts, ventricles) affect the surface of the brainstem.
- Distinguish, basis of the brainstem, tegmentum and tectum.
- Understand the principle of the organization of cranial nerve nuclei.

### SPECIFIC OBJECTIVES:

#### Medulla

- Describe principle features on ventral and dorsal views of medulla
- Describe features of the rhomboid fossa (anterior wall of the fourth ventricle)
- Describe how 'opening' of the ventricular system in fourth ventricle affect distribution of motor and sensory nuclei distributed in tegmentum of medulla and pons
- Which cranial nerves leave anterior/lateral aspect of medulla and in which order?

#### Pons

- Describe principle features on ventral and dorsal views of the pons
- Which cranial nerves leave the brainstem on the ventral border between pons and medulla and in which order?
- Describe how cerebellum connects to the brainstem segments.
- What is facial colliculus and where is it located?

#### Mesencephalon

- Describe principle features on ventral and dorsal aspects of mesencephalon
- What are cerebral crura and what is interpeduncular fossa?
- What are superior and inferior colliculi?
- Which cranial nerves leave ventral and dorsal aspects of mesencephalon?

#### Cranial nerves

Describe location of cranial nerve nuclei according to the segment of the brainstem (pons, medulla, mesencephalon) and their nature (in relation to sulcus limitans):

Motor: somatic, branchial and visceral

Sensory: visceral, special and general

For each and every cranial nerve name the nature of fibers they contain, how they leave the surface of the brainstem and how they leave cranial cavity.