

# **Summary of the lectures – Embryology**

## **General medicine 2nd year**

### **Winter term**

1. **INTRODUCTION:** Embryological terms. The ethical problems of Embryology. History of embryology. Blastogenesis. Fertilization and differentiation. Cleavage.
2. **BLASTOGENESIS and GASTRULATION:** Blastocyst, Implantation, Gastrulation. Origin of the first Germ layers.
3. **NOTOGENESIS** (development of notochord). The embryonic disc and its development. Mesoderm and development of somites. Mesenchyme.
4. **FETAL MEMBRANES AND PLACENTA DEVELOPMENT:** Amniotic sac expansion. Rotation of embryo. Amnion. Chorion. Placenta. Embryonic and fetal growth. Marks of the fetal maturity. Delivery.
5. **NERVOUS SYSTEM DEVELOPMENT:** Neural plate, groove and tube. Brain vesicles. Development of sense organs. The eye and inner ear.
6. **CIRCULATORY SYSTEM DEVELOPMENT I.:** First embryonic and extraembryonic circulation. Development of major vessels. Aortal arches. Veins.
7. **CIRCULATORY SYSTEM. DEVELOPMENT II.:** Heart loop. Septation of the atria and ventricles. Common cardial malformations.
8. **DIGESTIVE SYSTEM DEVELOPMENT I.:** Delimitation of the yolk sac. Archenteron. Stomodeum. Branchial region. Teeth. Derivatives of the branchial clefts, pouches and arches. Development of Tongue.
9. **DIGESTIVE and RESPIRATORY SYSTEM DEVELOPMENT:** Rotation of Intestine. Liver, Pancreas and Spleen Development. Respiratory passages and Lung Development.
10. **URINARY SYSTEM DEVELOPMENT:** Pronephros. Mesonephros. Metanephros. Urinary passages. Cloaca.
11. **GENITAL SYSTEM DEVELOPMENT:** Gonade. Wolffian and Müllerian ducts. External genital organs.
12. **OROFACIAL REGION, SKULL and SKELETAL DEVELOPMENT:** Nose. Olfactory organ. Upper and lower jaws development. Development of the secondary Palate. Cleft malformations. Axial skeleton. Extremities. Skull. Muscles and Skin Development.
13. Solving model questions from histology and embryology for credit and exam.