ANAT2341/EMBRYOLOGY - PRACTICAL CLASS 7 – T3 WEEK 8

PRACTICAL CLASS PROGRAM:

- Weekly Quiz + revision (15 minutes)
- Practical class activities (45 minutes)
- Guest Lecture by A/Prof Kirsty Walters
- Practical Class Revision (15 minutes)

PRACTICAL CLASS ACTIVITIES

1. Virtual embryo dissections
2. SmartSparrow module
3. Specimens of human birth abnormalities

LEARNING OBJECTIVES:

- Understand development of the reproductive system.
- Understand development of the renal system.
- Understand the developmental basis of abnormalities associated with placental development and the reproductive and urinary systems.

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Activity 1: Virtual human embryo dissections (11.15 am – 12 pm)
Please open the 3D-PDF files representing Carnegie stages 8, and 12 through to 23 of the 3D Atlas of Human Development that are freely available through this link. Identify the following features in these files and track how they develop over time:

- Mesoderm
- Intermediate mesoderm/mesonephros
- Mesonephric duct
- Paramesonephric duct
- Ureteric bud
- Metanephros
- Renal pelvis
- Ureter
- Urethra
- Urinary bladder
- Cloaca and urogenital sinus
- Genital tubercle
- Genital folds
- Genital swellings
- Kidney location
- Can you determine the sex of the embryos of stages CS21 and CS23?

Compare these 3D structures to the histology slides available on The Virtual Human Embryo resource.

Activity 2: SmartSparrow Exercises on sexual differentiation (11.15 am – 12 pm)
Please complete the online SmartSparrow exercises on the development of the urogenital system via this link. Please note that you will be the first group to access this, so please let Annemiek know in case there are issues with it. Please also complete the survey at the very end. Thanks so much!

Activity 3: Human developmental abnormalities (11.15 am – 12 pm)
Please select and investigate one of the developmental abnormalities listed belo. Specimens of the Museum of Human Disease of these abnormalities are on display in his class. Understand which systems are affected, and how these abnormalities arise during development. Write this up 250 words, and upload with your names in the forum on Moodle.

- Hydatidiform mole
- Horseshoe kidneys
- Hydrocoele testes
- Urachus
- Klinefelter disease

Guest Lecture (12 – 1 pm):
We will listen to a guest lecture by A/Prof Kirsty Walters, who is a researcher at Women's and Children's Health, and research leader in the field of female reproduction and ovarian function.