ANAT607 Human Embryology - Summer 2011

Course director: Yusuke Marikawa, PhD (marikawa@hawaii.edu)  Tel: 692-1411

Instructors: Dr. Yusuke Marikawa, Mr. TJ Hynd, Dr. Scott Lozanoff, Dr. Vernadeth B. Alarcon

Credit: 2 credits

Schedule: May 24th to June 30th
      Tuesday & Thursday (lecture), 1 pm - 3pm, BSB Room 222P
      Wednesday (lab), 1 pm - ~3pm, BSB Room167

Course objectives: Human Embryology is a lecture/lab course designed to develop an understanding of the essential aspects of human embryogenesis, and that many congenital malformations and birth defects arise from the misregulation of specific embryological events. The primary objectives are:

(1) to learn a series of critical events that take place during embryo development to create the structurally and functionally intact human body
(2) to understand the genetic, molecular and cellular basis of the mechanisms that regulate those critical embryological events, and learn how such important knowledge is obtained from studies using non-human model organisms
(3) to learn how the recent advancement in genomic and reproductive technology has yielded new diagnostic methods, surgical procedures, and embryo manipulation tools
(4) to discuss how such advancement has resulted in various issues that are of bioethical concerns


Evaluation and grading
- Written exams (mid-tern and final) on lecture materials
- Attendance and participation in discussion
- Lab assessment will be based on demonstration of skills and final report
Schedule (as of May 20, 2011; subject to further change)

Lectures (BSB 222P)

May 24th (Tue)  Introduction
Overview of human embryology
May 26th (Thu)  No class
May 31st (Tue)  Gametes and fertilization
Placenta development
June 2nd (Thu)  Germ layer formation
Construction of body architecture
June 7th (Tue)  Development of central nervous system
Neural crest development
Demonstration of plastinated fetus by Dr. Alarcon
June 9th (Thu)  Mid-term exam
June 14th (Tue) Heart development
Lung development
June 16th (Thr)  Muscle and bone development
Development of head and neck
June 21st (Tue) Kidney development
Sex differentiation
June 23rd (Thu)  Human embryology and bioethics
June 28th (Tue)  Final exam
June 30th (Thu)  (Lab report deadline)

Embryology Laboratory

Every Wednesday
(ANAT607 Laboratory; detailed schedule to be announced separately)