Developmental Biology (BIMA82), 15 hp

Scheme for fall 2017

(teaching period I)

Responsible for the course:
Stefan Baumgartner BMC D1021b
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E-post: Stefan.Baumgartner@med.lu.se
Please note that all activities are mandatory, except the lectures.

Course week 1  Genetics

Monday 28/8
09.00-11.00  Introduction into PBL for foreign students, D1019, Stefan Baumgartner

Tuesday 29/8
09.00-09.30  Call in. Stefan Baumgartner. GK-hall, BMC.
10.15-12.15  PBL-1 (see scheme).
13.00-15.00  Lecture: “Basics of genetics and genomic variation”. Distribution of articles for presentation Kristina Aaltonen. GK-hall, BMC.
15.00-17.00  Practical calculations: “Recombinations and probabilities”. Kristina Aaltonen. GK-hall. BMC

Wednesday 30/8
10.15-12.15  Lecture: ”Studying inheritance through crossings and pedigrees”. Kristina Aaltonen. Rune Grubb-hall, BMC.
13.00-15.00  Lecture: “Population genetics and multifactorial diseases”. Kristina Aaltonen. Rune Grubb-hall, BMC.

Thursday 31/8
13.00-15.00  Lecture: "Genomics in medicine”. Emma Ahlqvist. GK-hall, BMC.

Friday 1/9
Notify teacher of questions to be discussed on Monday.

Monday 4/9
10.15-12.15  PBL-2 (see scheme).
13.00-13.45  Article presentations groups A, B. Kristina Aaltonen. Rune Grubb-hall, BMC.
14.00-15.00  Interactive summary lecture based on incoming questions on all aspects of genetics. Kristina Aaltonen. Rune Grubb-hall, BMC.

Course week 2  Fertilization, cleavage / C. elegans.

Tuesday 5/9
10.15-12.15  PBL-1 (see scheme).
13.00-14.30  Lecture: ”Overview of all weeks of the course”. “Glossary for all weeks”. “Concepts of Developmental Biology”. Stefan Baumgartner. GK-hall, BMC.
14.30-17.00  Lecture: ”Gametogenesis, Fertilization”. Distribution of articles for presentation. Stefan Baumgartner. GK-hall, BMC.

Thursday 7/9
09.15-12.15  Lecture: “Cleavage. Stefan Baumgartner. GK-hall, BMC.
13.00-14.00  Lecture: "C. elegans development”. Stefan Baumgartner GK-hall, BMC.
14.00-15.00  Film “Cell fate and cell lineages in C. elegans”. Stefan Baumgartner. GK-hall, BMC.
Practical calculations: “Pedigrees and linkage analysis”. Kristina Aaltonen. GK-hall. BMC

Friday 8/9
Notify teacher of questions to be discussed on Monday.

Monday 11/9
10.15-12.15 PBL-2 (see scheme).
13.00-13.45 Article presentations groups C, D. Stefan Baumgartner. Rune Grubb-hall, BMC.
14.00-15.00 Interactive summary lecture based on incoming questions on fertilization / cleavage and C. elegans. Stefan Baumgartner. Rune Grubb-hall, BMC.

Course week 3 Early development in invertebrates

Tuesday 12/9
10.15-12.15 PBL-1 (see scheme).
13.00-15.00 Lecture: "Early development in invertebrates I". Distribution of articles for presentation. Udo Häcker. GK-hall, BMC.

Wednesday 13/9
10.15-12.15 Lecture: "Early development in invertebrates II". Udo Häcker. Rune Grubb-hall, BMC.
13.00-15.00 Practical calculations: “Hardy-Weinberg proportions and population genetics”. Kristina Aaltonen. Rune Grubb-hall. BMC

Friday 15/9
Notify teacher of questions to be discussed on Monday.

Monday 18/9
10.15-12.15 PBL-2 (see scheme).
13.00-14.00 Interactive summary lecture based on incoming questions on early development in invertebrates, Udo Häcker, Rune Grubb-hall, BMC.

Course week 4 Early development in vertebrates: amphibians and fish.

Tuesday 19/9
10.00-10.15 meeting course leader and tutors, corridor around I1208, I1211 & I1211.
10.15-12.15 PBL-1 (see scheme). Distribution of questionnaire: "how does the PBL work for me?"
13.00-15.00 Lecture: "Cell communication during development". Distribution of articles for presentation. Udo Häcker. Rune Grubb-hall, BMC.

Wednesday 20/9
10.15-12.15 Lecture: "Early development in vertebrates I: amphibia and fish". Udo Häcker. GK-hall, BMC.
14.00-17.00 Demonstration/Practical work. Udo Häcker, Stefan Baumgartner, Edgar Pera. Lab D10. PBL group 1 + PBL group 2. Distribution of homework.

Thursday 21/9
14.00-17.00 Demonstration/Practical work. Udo Häcker, Stefan Baumgartner, Edgar

Friday 22/9
Notify teacher of questions to be discussed on Monday.

Monday 25/9
10.15-12.15  PBL-2 (see scheme). Leave questionnaire back to tutor.
13.00-13.45  Article presentations. Groups E, F. Udo Häcker. GK-hall, BMC.
14.00-15.00  Interactive summary lecture based on incoming questions on early development in amphibians and fishes, Udo Häcker, GK-hall, BMC. Leave written homework/report back to teacher.

Course week 5  Early development in vertebrates: birds and mammals

Tuesday 26/9
10.15-12.15  PBL-1 (see scheme).
13.00-15.00  Lecture: "Early development in vertebrates II: birds and mammals". Distribution of articles for presentation. Udo Häcker. GK-hall, BMC

Individual discussion with the tutor about PBL. Tutor allocates time and location.

Wednesday 27/9
10.15-12.15  Lecture: "Early development in vertebrates III: birds and mammals". Udo Häcker. GK-hall, BMC.
13.00-15.00  Demonstration/Practical work. Udo Häcker, Stefan Baumgartner. Lab, D1018a. PBL group 1 (X students).
15.00-17.00  Demonstration/Practical work. Udo Häcker, Stefan Baumgartner. Lab, D1018a. PBL group 2 (Y students).

Thursday 28/9
13.00-15.00  Demonstration/Practical work. Udo Häcker, Stefan Baumgartner. Lab, D1018a. PBL group 3 (Z students).

Friday 29/9
Notify teacher of questions to be discussed on Monday.

Monday 2/10
10.15-12.15  PBL-2 (see scheme).
14.00-15.00  Interactive summary lecture based on incoming questions on early development of birds and mammals, Udo Häcker, GK-hall, BMC.

Course week 6  Neurogenesis

Tuesday 3/10
10.00-10.15  meeting course leader and tutors, corridor around I1208, I1211&I1211.
10.15-12.15  PBL-1 (see scheme).
13.00-15.00  Lecture: "Formation of the nervous system; birth and migration of
neurons and glia, determination of neural cell fate”. Distribution of articles for presentation. Per Ekström. GK-hall, BMC

Wednesday 4/10
13.00-15.00 Lecture: "Formation of the nervous system; axon-outgrowth and - guidance, formation of synapses, trophic factors and survival”. Per Ekström. Rune Grubb-hall BMC.
15.15-16.15 Lecture: "Formation of the eye”. Per Ekström, Rune Grubb-hall, BMC.

Friday 6/10
Notify teacher of questions to be discussed on Monday.

Monday 9/10
08.00-09.00 Article presentation. Groups I, J. Per Ekström. GK-hall, BMC.
09.00-10.00 Interactive summary lecture based on incoming questions on neurogenesis, Per Ekström, GK-hall, BMC.
10.15-12.15 PBL-2 (see scheme).

Course week 7  Limb development and–regeneration / Heart formation

Tuesday 10/10
10.15-12.15 PBL-1 (see scheme).
13.00-15.00 Lecture: "Limb formation - morphology and molecular mechanisms”. Distribution of articles for presentation. Edgar Pera. GK-hall, BMC.

Wednesday 11/10
10.15-12.15 Lecture: "Limb regeneration”. Edgar Pera. Rune Grubb-hall, BMC.
13.00-14.00 Lecture: "Overview of organ development". Edgar Pera. Rune Grubb-hall, BMC

Friday 13/10
Notify teacher of questions to be discussed on Monday.

Monday 16/10
10.15-12.15 PBL-2 (see scheme).
14.00-15.00 Interactive summary lecture based on incoming questions on limb development/regeneration and heart formation, Edgar Pera, Rune Grubb-hall, BMC.

Course week 8  Organ biology / development and environment

Monday 16/10
15.00-17.00 PBL-1 (see scheme).

Tuesday 17/10
Wednesday 18/10
10.00-11.00 Lecture: "Formation of the heart". Edgar Pera. GK-hall, BMC.
11.15-12.15 Lecture: "Development and environment". Stefan Baumgartner GK-hall, BMC.

Thursday 19/10
Notify teacher of questions to be discussed on Monday.

Friday 20/10
13.00-15.00 PBL-2 (see scheme).
15.00-16.00 Interactive summary lecture based on incoming questions on organ formation. Edgar Pera. GK-hall, BMC.

General question hour possible if required. Otherwise, please approach the respective teacher directly, thanks.

Exam

Friday 27/10
09.00-14.00 Exam. Health Science Center C313, Baravägen 3
GOOD LUCK!

Have you filled in your comments for the course evaluation in Moodle? ...thank you!

Thursday 9/11
15.30-17.00 Course evaluation meeting with students, tutors and teachers. D1044a, BMC.

Tuesday 20/11
09.00-14.00 Re-exam. I1245+I1250 / D1019a (will be notified), BMC.

Jan. 2018 Re-exam. Time and location will be available upon request.
### PBL

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### Group allocation for PBL, articles, chairpersons/opponents and demonstrations

#### Group I Udo Häcker

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#### Group III Edgar Pera

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