# **Evaluation of student course HUIMM906/306 Spring 2017** Background:

Due to many applications, twelve students were selected from the applicants (9 for HUIMM306, 3 for HUIMM906): two PhD fellows, 9 master students and 1 medical student of the research line (forskerlinje). The background was biomedicine (8), molecular biology (1), odontology (2) and medicine (1). The course was an intensive course over 14 days starting Monday May 29. The course was from 8 in the morning until 16 in the afternoon. The course was organized by Silke Appel with help from Richard Davies, Veronika Binder, Kjerstin Jacobsen and Marianne Eidsheim. Karl A. Brokstad had the practical training for one method and Marc Niere had one theoretical lecture.

The plan for the course is given in the appendix. The methods that were included in the course were sterile technique/ cell isolation, cell culture, protein lysis and protein determination, SDS-PAGE and Western blotting, ELISA, PCR and immunofluorescence staining.

The evaluation was performed as a written evaluation.

Nine participants handed in a written evaluation. The questions are listed in the appendix.

One participant following HUIMM906 failed due to incomplete report, all others passed.

#### **Results from the written evaluation**

Question A, B, E, F and G were graded from 1 to 6 with 6 being the best (very bad, bad, OK, good, very good, excellent). The average is presented. Question C and D as given 'as is' and question H was comments.

#### A. What is your general impression of the course?

One graded 'excellent', one graded 'very good to excellent', six graded 'very good', one graded 'ok'.

Mean: 4.9

#### B. How much did you learn at the course?

Four graded 'very much', three graded 'much', two graded 'some'.

Mean: 4.2

## C. Have your expectations been fulfilled with regard to the description of the course?

One graded 'very relevant', eight graded 'relevant'.

## D. What do you think about the demands of the course in relation to the credited study points?

Eight graded 'appropriate', one graded 'too much'. – We got 5 points

# E. What do you think about the scientific knowledge/background of the lecturers and supervisors?

Three graded 'excellent', five graded 'very good', one graded 'ok'.

Mean: 4.6

#### F. How were the relevant topics communicated?

One graded 'excellent', seven graded 'very good', one graded 'ok'.

Mean: 4.9

#### G. How did you like the protocols?

Two graded 'excellent, three graded 'very good', three graded 'good', one graded 'ok'.

Mean: 4.7

#### **H. Comments/suggestions:**

Student A: The first days were a bit too messy and hectic. Thanks for the cake! And thanks for letting me be part of this course. A very well chosen set of methods, good tips for further planning of experiments

Student B: Really good and will come in handy in my master project. The teaching was good, could ask all kind of questions and all of them got answered. All information needed was provided in the protocols. If the course will have a 12 people capacity it should be organized to be less time consuming, e.g. a lot of unneccesary waiting.

### Appendix

### 1) Timetable





### HUIMM906/306 29.5.-12.6.2017

Date	Time	Task	Supervisor
Monday	10:00-10:30	General Introduction	Richard
29.5.	10:45-11:30	Introduction Buffy coat/monocytes,	
BBB 9A109bP	11:45-12:30	Protocols #1, #2, #3 (PBMC	
		isolation+stimulation, Protein	Richard/Kjerstin
		concentration)	
	13:30-16:00	Calculation/preparation of buffers/BSA	
		standards	
Tuesday	9:00-14:00	Buffy, isolation of PBMC and	Silke/Kjerstin/
30.5.		monocytes – 1 Falcon each, 1 plate (6	Richard
BBB 9A109bP		wells) per group	
	14:30	add LPS to half of the cells	
	15:00-16:00	lyse cells in 2 of 3 wells of each	
		population	
Wednesday	9:00-10:30	BCA assay, Direct Detect	Silke
31.5.	10:30-11:30	Introduction SDS-PAGE and WB	Marc
BBB 9A109bP	12:00-13:00	Protocols #4, #5 (SDS-PAGE and WB)	Silke
	13:30	Harvest remaining supernatants (~24h)	Silke/Kjerstin
	14:00-16:00	Prepare gels for WB	Silke/Kjerstin/
			Veronika
Thursday	9:00-10:00	load gels	Kjerstin/Richard/
1.6.	10:00-11:30	gel run	Veronika
BBB 9A109bP	12:00-13:00	transfer	
	13:00-13:30	Ponceau staining	
	14:00-15:00	blocking	
	15:00-16:00	divide membrane, phosphospecific and	
		total 4°C ON	
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Date	Time	Task	Supervisor
Friday	9:00-9:30	continue WB: washing	Veronika/ Silke
2.6.	9:30-10:30	2nd Ab - Introduction PCR/qPCR	
Conference	10:30-12:30	Washing and detection WB	
room BBB	13:00-15:00	Protocol #6 (PCR/qPCR)	Silke
KF109F			
Tuesday 6.6.	9:00-12:00	PCR/qPCR	Silke/Kjerstin
BBB 9A109bP	12:00-14:00	Introduction/Protocol # 7	Silke
		(Immunostaining), coverslip coating	
	14:00-15:00	seed cells for immunostaining	Kjerstin/Silke
	15:00-16:00	Analyze PCR/qPCR	Silke
Wednesday	9:00-12:00	Immunostaining (fix+stain)	Kjerstin
7.6.	13:00-15:00	Introduction ELISA, Protocol #8	Silke
BBB 9A109bP		(ELISA), coat plates	Marianne
	15:00-16:00	Seminar report writing	Richard
Thursday	8:00-16:00	ELISA	Marianne/Silke
8.6.		in incubation steps: Immunostaining	Karl
BBB 9A109bP		(analyze)	
Friday	9:00-11:00	Preparation Result presentation	Silke/Richard
9.6.	11:00-12:00	Introduction flow cytometry	Richard
BBB 9A109bP	13:00-16:00	Preparation Results presentations	Silke/Richard
Monday	9:00-16:00	Results presentations+discussion	Veronika/Silke/
12.6.		Summary/Conclusion	Richard/
BBB 9A109bP			

2) The evaluation form

#### **Evaluation of the course**

#### Molecular and cellular methods in immunology – HUIMM906/306

We would greatly appreciate your feedback so we can improve the course.

A. What is your general impression of the course?

B. How much did you learn at the course?

What do you think about the scientific content of the course?

C. Have your expectations been fulfilled with regard to the description of the course?

D. What do you think about the demands of the course in relation to the credited study points?

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too much / too difficult --- appropriate --- too little / too easy
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How was the teaching?

E. What do you think about the scientific knowledge/background of the lecturers and supervisors?

F. How were the relevant topics communicated?

G. How did you like the protocols?

**H. Comments/suggestions:** (use backside if necessary)