

# Undervisningsportfolio

## 1. Undervisnings-CV: Oversigt over undervisnings- og vejledningsopgaver med angivelse af fagområder, omfang, niveau (BA, kandidat, EVU, Ph.d) samt evt. censoropgaver.

### Teaching Experience and Competence:

I have been actively involved in teaching since 2009. My experience stems from the Department of Health Science and Technology, Aalborg University (AAU). I have been teaching at the Medicine and Medicine with Industrial Specialization (MedIS) educations from 2010 until now. My expertise includes project supervision, case based teaching and lecturing. In addition, I have been coordinating third semester on MedIS and Medicine bachelor since 2012. I have implemented histology and dissection courses on first to fifth semester on the two educations. All of my teaching activities are based on problem based learning (PBL).

### Case facilitation

In the MedIS and Medicine education, cases with fictive patients and their symptoms are used as the framework for the bachelor education. The case work at the MedIS and Medicine education at AAU is based on the so called seven jump model, where the students work with each case over the course of one week in groups of 12-14 persons. In the seven jump model, the students start the week at case opening with reading, understanding and analyzing the case together with their case facilitator. Here, a key feature is a comprehensive brainstorm based on the case text and the students pre-existing knowledge. At the end of the opening session, the students define their learning outcomes for the week. In the time between case opening and closing the students are offered several learning opportunities such as lectures, workshops and clinical placements to reach their learning outcomes. At case closing, the students go through their acquired knowledge, trying to cover the learning outcomes and reflecting on different comprehensions of the material. The case facilitator plays a key role in case based teaching and the development of students' skills as self-directed learners. I have been an active case facilitator since 2011 and a brief summary of my experience with the seven jump case model is listed below:

2011: 2 groups on 1st semester, 2 groups on 3rd semester and 2 groups on 2nd semester

2012: 2 groups on 1st semester, 2 groups on 3rd semester, 2 groups on 4th semester and 1 group on 6th semester

2013: 2 groups on 3rd semester, 2 groups on 4th semester and 1 group on 6th

2014-2015: 2 groups on 3rd semester and 2 groups on 4th semester

2016: 2 groups on 4th semester

2020: 2 groups on 4th semester

### Project supervisor and examiner

Over the last four years I have been the supervisor of 19 student project groups and co-supervisor of 11 project groups as summarized below. Furthermore I have been co-supervisor of one Ph.D. student. The projects have had an average of about 6 students per group and have had an extent of 10-30 ECTS per project. Most projects that I have supervised have sprung from my research areas ranging from establishment of an in vitro blood-brain barrier model, drug delivery to the brain to the impact of glioblastoma cells on the blood-brain barrier. A special feature for MedIS and Medicine projects are their mandatory laboratory work.

2009: 3 groups on 4th semester

2010: 2 groups on 3rd semester, 1 group on 4th semester, 1 group on 6th semester and 2 master students

2011: 2 groups on 8th semester, 2 master students

2011-2014: 1 Ph.D. student

2012: 3 groups on 4th semester, 1 group on 7th semester and 2 master students

2013: 1 group on 4th semester and 2 groups on 6th semester

2014: 2 groups on 4th semester, 1 group on 6th semester, 1 group on 7th semester and 2 master student

2015: 2 master students

2016: 2 Master students and 1 bachelor group

2018: 3 Master students

2019: 2 4th semester groups

2022: 2 bachelor groups and 1 7th semester group

2023 1 bachelor group

### Lectures

I have given several lectures mainly at the MedIS and Medicine education. I aim at creating the lectures at an appropriate teaching level so it is easy to follow and I repeat the main facts to the students. This to make it easy for them to understand which parts of the lecture is of greater importance than others. I have had good feedback on my lectures e.g. I was nominated for "teacher of the year" by the 1st semester students in 2014. Some of the lectures I have given more than once and I have tried to improve them every time by implementing the feedback from students and any other experience I have acquired since the lecture was last given.

2009-2011: 1 lecture on "The blood-brain barrier" for visiting VUC students studying Biology  
 2010-2023: 1 lecture on 1st semester "Histology of the cardio vascular system"  
 2011-2016: 1 lecture on 1st semester "Development of the cardio vascular system"  
 2012-2023: 4 lecture on 3rd semester "Introduktion til nervesystemet (double)", "Histologi og udvikling af nervesystemet", "Cerebellum"  
 2013-2016: 1 lecture on 5th semester "In vitro BBB models – a screening tool in drug development"  
 2014-2022: 1 lecture on 8th semester "Nano carriers and their formulation"  
 2015: 1 lecture on "The blood- brain barrier" on a Ph.D. course "Therapeutic development: target validation and biomarkers"

#### Laboratory course instructor

I like to interact directly with students and I believe that practical experience strengthens the learning outcome for the students. Therefore I have implemented many new laboratory courses on the MedIS and Medicine educations. The courses can be divided into micro- and macro anatomy. I took over the histology course on 1st semester and have later on implemented histology on 2nd, 3rd and 4th semester. I have also implemented dissection courses on the major organs on 1st to 5th semester. The team of student workers has helped me organize and teach on these dissection courses under my guidance.

2009: Co-instructor on "Introduction to cell culturing" on 4th semester  
 2010-2011: Co-instructor and organizer of "Introduction to histology" on 1st semester  
 2012-2023: Instructor and organizer of "Introduction to histology" on 1st semester  
 2012-2023: Instructor and organizer of "Histology" on 2nd semester  
 2012-2023: Instructor and organizer of "Histology" on 3rd semester  
 2012-2023: Instructor and organizer of "Brain dissection" on 3rd semester  
 2013-2023: Instructor and organizer of "Histology" on 4th semester  
 2014-2023: Instructor and organizer of "Heart, Lung and Kidney dissection" on 1st semester  
 2014-2023: Instructor and organizer of "Gastro-intestinal tract dissection" on 2nd semester  
 2023: Instructor and organizer of "Placenta dissection" on 4th semester  
 2023: Instructor and organizer of "Eye dissection" on 3rd semester  
 2015-19: Instructor and organizer of "Upper and lower extremities dissection" on 5th semester

#### Examiner

2011-23: Oral examiner on all project groups and master student exams  
 2015-23: examiner for 3rd semester written exams (~260 students).

## **2. Studieadministration: Oversigt over studieadministrative opgaver, eksempelvis medlem af studienævn, studieleder, semesterkoordinator, fagkoordinator, akkreditering m.v.**

#### Semester coordination

I am coordinating the third semester of the MedIS and Medicine bachelor education and have been for the past four years. This involves planning of the semester start and group formation, laying down the schedule, running semester meetings, maintenance of the website for the semester, as well as arranging pre-semester meetings with the teachers and coordinating with module coordinators to insure the teaching quality on the semester. After the semester, a semester report is composed for the study board evaluating the semester and I note which actions should be taken for improvements next year. Furthermore in 2015 a new task has been to compose a semester description which should give the students a better overview of the course of the semester. Together with the three module coordinators on 3rd semester I have reorganized the semester to optimize on the flow and coherence of the semester. I have also revised the clinical compendium for 3rd semester for the students to obtain a better learning outcome from their clinical placements and align the stays to other study activities on the semester.

#### Module coordinator

In 2016 I have been substituting as module coordinator on 4th semester module 4.2 Child growth.

#### Study board member

In 2016 I was elected as a member in the study board for medicine.

#### Accreditation

In the fall 2015 I took part in the process of having the bachelor in Medicine accredited.

#### Manager of the study halls and laboratories

In spring 2013 I was appointed manager of the two study halls affiliated the MedIS and Medicine educations and I became the leader of a team of three student workers. In 2015 I also became responsible for the then two, now three student laboratories affiliated the educations MedIS and Medicine.

### **3. Universitetspædagogiske kvalifikationsforløb: Oversigt over gennemførte universitetspædagogiske kursusforløb, PBL-kurser, workshops, udviklingsprojekter, kollegial supervision o.l.**

#### **Formal Qualifications**

I have participated in the course University Teacher Education for Assistant Professors (Adjunktpædagogikum) from October 2012 to February 2014. The course is estimated to a workload equivalent of 10 ECTS. (See the attached certificate and evaluation).

Furthermore from 2012-2014 I have participated in "Undervisningens dag" and also presented a poster in 2014.

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### **4. Anden form for kvalificering: Konferencedeltagelse, debatindlæg, oplæg m.v. i relation til uddannelse, "Undervisningens dag", o.l.**

From 2012-2023 I have participated almost every "Undervisningens dag" and also presented a poster in 2014.

### **5. Undervisningsudviklingsforløb og undervisningsmateriale: Oversigt over medvirken til udvikling af nye moduler, undervisningsmateriale, uddannelser, e-learning, samarbejde med eksterne samarbejdspartnere o.l.**

I took over the histology course on 1st semester MedIS/Medicine and have later on implemented histology on 2nd, 3rd and 4th semester. I have also implemented dissection courses on the major organs on 1st to 5th semester. The team of student workers has helped me organize and teach on these dissection courses under my guidance.

### **6. Nominering til og/eller modtagelse af undervisningspriser.**

I have been nominated twice for "Teacher of the year" by MedIS/Medicine and won "Teacher of the year" in 2019 both for the studyboard for medicine and for the Health Faculty.

### **7. Evt. personlige refleksioner og initiativer: Personlige overvejelser knyttet til undervisning og vejledning, ønsker til og planer for pædagogisk videreudvikling, planer for opfølgning på undervisningsevalueringer m.v.**

#### **Teaching Style and Philosophy**

In my teaching I have tried to guide the students in the best possible way and give them as much supervision as needed and therefore I am always available for questions and discussions. I aim at giving constructive feedback on projects and laboratory work, to strengthen the students learning outcome. In my opinion good guidance and teaching is to adapt the teaching methods to the student's learning and working skills. I encourage students to speak up, have their own opinions and motivate them to have discussions on the subjects, which helps them to a better understanding of the subjects. I always encourage the students to not just learn the theory by heart but also to fully understand it in different contexts and be able to apply this new obtained knowledge in practice. Furthermore I use my own experience as a student and teacher to give the students advice on how to obtain the results that they aim at obtaining during their education.

I like to plan and prepare my teaching very well to ensure that all aspects of the subject have been included. This gives me a good foundation for being a good teacher that is able to elaborate on subjects and explain difficult material to students. I am a patient, humorous and calm person which I believe helps me in my teaching by making the students feel comfortable, relaxed and heard.

I studied Biology at the University of Copenhagen and the Aalborg PBL Model has therefore not been a teaching method that I have been practicing before I started my Ph.D. study at Aalborg University. I have put some effort into learning the principles of PBL including attending the University Teacher Education and I am very positive about this teaching method. I have observed that students are very eager to learn and to cooperate presumably because they are highly involved in the teaching process in groups. The problem and result oriented and teamwork based teaching method that is the foundation of the Aalborg PBL Model is therefore the foundation of my teaching philosophy.

### **8. Andet.**

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