

# Action plan based on the student feedback received in the 2nd semester of the 2022/2023 academic year

**Department:** Department of Molecular Biology  
**Faculty:** Faculty of Medicine  
**Compulsory course:** Molecular Cell Biology 2  
**Optional or Elective courses:** Pathobiochemistry; Methods in Molecular Biology

## *1. Our feedback on general comments of the students*

We are pleased to see that evaluation scores obtained from roughly half of students of Molecular Cell Biology 2 on all items of the subject questionnaire corresponded to the average scores of the faculty, while those received in the questionnaire interrogating the practical education slightly exceeded the average. Thank you for your positive feedback providing further support to our efforts in making Molecular Cell Biology an essential, up-to-date and comprehensive pillar of the preclinical medicine module. We are committed to keep up our teaching standards in the future.

## *2. Our feedback on specific comments on compulsory subjects*

We are grateful for your numerous positive comments acknowledging the well-organized teaching practice of the department and appreciating the preparedness and proficiency of some lecturers and lab teachers alike. On the other hand, the critical remarks were centered mostly around the following issues:

- a. **„I did not really understand the importance of the experiments we were doing and just went along with the steps.” „Some experiments did not work at all for any of the groups in our class so I think some materials may be out-of-date.”**

The aim of the practicals is to demonstrate some fundamental and frequently used molecular biology techniques such as cell fractionation, genotyping, molecular cloning etc. to students. Although, at first sight, these experiments might not seem to have a lot to do with routine medical diagnostic and therapeutic activities, they actually have important medical implications such as quantitation of proteins in biological samples (biuret reaction), production and purification of recombinant drugs (in vitro translation and affinity chromatography), prenatal genetic diagnostics (genotyping). Moreover, they improve logical thinking, critical evaluation and technical skills alike. As experiments are deemed essential part of the subject, it would be very counter-productive to swap them for seminars merely revising the theoretical material again, considering that lecture recordings are available on the Moodle page of the subject.

Our experiments are optimized for the framework and duration of practical classes, and all reagents are carefully prepared by our trained staff. As successful experiments are our common interest, they follow established standard protocols and never use expired reagents or damaged equipment. Nevertheless, as some reagents (especially enzymes) are very sensitive to subtle changes in environmental conditions, their quality might

deteriorate rapidly if not stored and used properly, e.g., not placed back on ice immediately after pipetting.

**b. „I wish there was a book”**

Actually, there is an official course book, the latest edition of Lodish' Molecular Cell Biology, an internationally acknowledged textbook used at several universities in Europe and the USA. Our students can also get prepared for the midterms and exams from uploaded lecture files and video recordings. On the other hand, a concise textbook edited by the staff of the department is under preparation and expected to be published soon.

**c. „make the practicals more related to what we are learning during the lectures”**

Though desirable, in practice it is very difficult to synchronize the labs with the schedule of lectures. Firstly, the experiments undertaken during the semester are usually complex and conducted over two or even three practical lessons (e.g., the genotyping of the taste receptor or the *in vitro* translation assay). Secondly, studying the cell cycle, apoptosis or signaling pathways would require special equipment and methods that are well beyond the scope of MCB2 teaching labs. Nevertheless, we put lots of resources and efforts in setting up sensible and meaningful labs, which allow students to get an insight into how molecular systems work, rather than converting our practical courses into seminars with no benchwork.

**d. „Midterms, or any self testing could be better for students to evaluate their knowledge to see if it is at the expected level of the examination requirements. Studying this subject during the semester should be encouraged more like some other courses. Bonus points, exemptions etc. to increase participation.”**

We fully share this opinion. Therefore, following recent changes implemented in the Study and Examination Regulations of the University, we are organizing a theoretical midterm exam again, the successful completion of which is a prerequisite for acknowledging the semester. Additionally, as a further stimulus, students obtaining a grade of 4 or 5 in the midterm will receive 1 or 2 bonus points helping them get exemption from the lab exam.

Unfortunately, there is no way to hold more midterm exams because it would lead to the "sacrifice" of additional practical time as it is practically impossible to find a suitable time outside the timetable and especially a free room with the near-complete occupancy of the room capacity in the EOK.

**3. Our feedback on specific comments on optional or elective subjects**

The Pathobiochemistry and Molecular Biology Research subjects are highly esteemed among students as mirrored by outstanding feedback scores.

**a. „Der Laborbesuch war Toll und hat mein Interesse sehr geweckt.” (,The lab tour was great and aroused my interest.”)**

The explicit aim of the Methods in Molecular Biology elective is to provide an opportunity for interested students to get a first-hand experience in departmental

research fields, toolkits and experimental procedures. This prompted us to organize lab tours for interested course participants. We are delighted to have received positive and encouraging feedback on this novel initiative.

**b. „Tough subject as an elective. Maybe should be 3 credits considering the work that goes into it from both the department and the students”**

Thank you for appreciating the amount of work and time the lecturers of the Pathobiochemistry course invest into the preparation of their presentations. However, the credit value of courses is mostly determined by the number of weekly contact hours, and the department has no influence on changing that.

Date: 06/10/2023