Regulations: Physiology closing labs.
General Medicine
2018/2019, 1st semester

The physiology closing lab will be held on the 14th week at the time of regular labs. Detailed topics of the closing lab can be found on the web page of the Department of Physiology. Evaluation of the closing lab is either "pass" (+) or "fail" (–). In case of an absence the evaluation will be a "fail" (–).

In order to participate in the closing lab, students must present a photo ID, lab coat and their verified laboratory exercise book.

Students are expected to know the values of **physiological parameters** related to the curriculum of the first semester as a **minimum requirement**. These parameters can be found in the practical guide. Students will get 3 questions regarding these parameters, from which at least 2 have to be answered correctly (range or value AND units as well), otherwise the evaluation of the closing lab will be "fail" (–). Next, the student picks a topic card, and performs the named lab INDEPENDENTLY. After finished, the student discusses the results with a closing lab instructor. For this, the knowledge of the theoretical background is expected.

A **failed closing lab can NOT be repeated.** In case of a failed closing lab, the student loses his/her end-semester exam mark offered based on the results of the self-control tests, so the student **must take the end-semester exam during the exam period**. In such cases the student must also answer questions related to the labs during the end-semester exam.

26th November 2018

Dr. Balázs Horváth
laboratory officer

Topics of Physiology closing labs
General Medicine
2018/2019 academic year, 1st semester

1. Make an ECG record from another student and evaluate it!
2. Evaluate the given ECG record!
3. Measure the blood pressure and examine the radial pulse of your colleague and delineate the punctum maximum of each cardiac valve!
4. Calculate the metabolic rate on the basis of a given spirometric registration and evaluate the pulmonary parameters of the examined person!
5. Demonstrate the function and operation of the components of the contractile activity measuring setup!
6. Demonstrate the effect of Ba^{2+} and papaverine on rat uterinal muscle!
7. Demonstrate the effect of $Ca^{2+}$and Mg^{2+} on rat uterinal muscle!
8. Determine the white blood cell count of a given blood sample!
9. Demonstrate the effect of thiourea on osmotic resistance of red blood cells!
10. Demonstrate the effect of altered peripheral resistance and altered venous return on ejection fraction in Starling preparation!
11. Demonstrate the effect of altered peripheral resistance and altered venous return on cardiovascular shock in Starling preparation!
12. Demonstrate the effects of physostigmine and atropine on the acetylcholine evoked smooth muscle contraction by means of simulation program!
13. Demonstrate the effect of extracellular K^+ concentration on smooth muscle function by means of simulation program!
14. Demonstrate the effect of norepinephrine on the mechanical properties of arterial ring preparation with and without intact endothelium!
15. Determine the stimulus dependent force generation of a virtual skeletal muscle using stimulation amplitude within the range of 0 and 1.6 V!
16. Determine the length-tension relationship of a virtual skeletal muscle!
17. Determine the longest possible period between 2 successive stimulation using 1.5 V stimulation amplitude where the stimulation is still able to cause summation, incomplete and complete tetanus on a virtual skeletal muscle!
18. JOKER! Choose your favourite topic and carry out that lab!