

## **Supplementary Material S1**

### **Course Pharmaceutical biology and asepsis (5 cr)**

- Compulsory laboratory course for Bachelor of Pharmacy students.
- Course is recommended to be taken on the second study year during the three-year study period.
- Course consist of lectures, laboratory work, written exercises and independent study.
- Course belongs to the discipline of pharmaceutical biology.

Course intended learning outcomes:

After completing the course, the student

- masters the general skills and principles of pharmaceutical biology experiments, needed in the laboratory and pharmacy.
- is able to use the European Pharmacopoeia herbal drugs monographies and perform as well as interpret the common herbal drug identification, purity and content assays.
- masters the preparation and interpretation of certificate of analysis regarding herbal drugs or products isolated from herbal drugs.
- is able to use optical microscope in the study of herbal and microbe samples as well as to interpret the study results.
- masters the general working principles of asepsis and handling microbes in the laboratory and pharmacy.
- is capable to cultivate microbes and perform the staining and identification protocols of microbes.
- is aware of the common susceptibility testing methods and is able to interpret the susceptibility testing results.
- is capable to perform and interpret the common European Pharmacopoeia microbial quality tests for drug formulations and herbal products.
- knows the quality assurance methods regarding manufacturing sterile products and is capable to interpret the results of the quality tests.
- is capable to work independently in the laboratory according to work and safety instructions.
- is capable to plan the working schedule and present the work results orally and in written form.