

# European Researchers' Night 2019 – program of activities at the UL-Faculty of Pharmacy

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At the UL-Faculty of Pharmacy (Aškerčeva 7), as part of the **European Researchers' Night 2019** event, on Friday, September 27, 2019, between 5 pm and 10 pm, we will carry out activities for primary and secondary school youth and adult visitors. The events will take place in three laboratories, the P1 lecture room and the Mirje Pharmacy.

## 1. **How medicinal drugs are made?:** a workshop with demonstration experiments for primary school children, their parents and the general public.

Location: 007-Laboratorij, Farmaceutvska tehnologija, ground floor FFA

Objectives: to show children and others (wider public) the processes of medicine production. In this way, we want to familiarize them with medicines, which can present a “taboo” subject in the eyes of the public. The main objective of the activity will be to demonstrate and explain several drug manufacturing processes (tableting, microcapsulation, 3D printing, making of cream), thereby demonstrating that it is a complex process, but which, from simple ingredients, leads to the final product - the medicine.

Audience: children, their parents and the public

## 2. **Isolation of DNA from fruits & Diabetes & Blood cells:** hands-on workshops and demonstration experiments for primary school children.

Location: 203-Laboratorij, Klinična biokemija, 2<sup>nd</sup> floor FFA

Objectives: **Isolation of DNA – molecules of life from fruits:** to demonstrate to pupils that DNA is present in every living being and that it can be easily isolated by common things that we have at home. DNA will be isolated with kitchen salt, detergents and alcohol from several fruits. **Diabetes:** to teach pupils about diabetes, its causes, symptoms, means of monitoring and treatment. The pupils will have the opportunity to measure their blood glucose levels. **Blood cells:** Participants will prepare their own blood smear and observe the blood cells under the microscope. They will learn about different types of blood cells and their roles in the human body.

Audience: Primary school children and their parents

### 3. **Elephant toothpaste, Lava lamp and Silver mirror:** hands-on workshops and demonstration experiments for primary and secondary school children/youth.

Location: 306-Laboratorij, Farmaceutvska kemija II, 3<sup>rd</sup> floor

Objectives: 3. **Elephant toothpaste:** to represent interesting chemical experiment and explain the occurring chemical reaction behind. Based on simple chemistry demonstration, the participants can learn about catalysts, and their impact on rate of chemical reaction, exothermic reaction and identifying the chemical reaction's products on. The main aim of this demonstration is to give a basic idea of the importance of understanding a certain chemical reaction, which is, in general, also true for some research fields in pharmacy. **Lava lamp:** to increase student interest for chemistry through interesting experiments. We would like to present experiments to students in an easy and simple way and explain physical and chemical properties of liquids. The experiments will include two-phase (oil-water) system, which can be translated to water pollution with oil and the impact on the ecosystem. **Silver mirror:** to enable primary and/or secondary school children the experience of the research work in the pharmaceutical-chemical laboratory. We want to introduce the profession of a pharmacist to the primary and/or secondary school children in a scientific-research institution. We want to impress them to study pharmacy and to inform them about the possibilities for further scientific research in the pharmaceutical profession. We would like to inform all visitors at this workshop about the potential toxicity of colloidal silver popular as an alternative medicine. Excessive intake of silver ions in the body causes the accumulation of silver in the skin and other tissues, which we professionally call argyria.

Audience: Primary and secondary school children/youth and their parents - up to 20 visitors in the group

### 4. **Safety and effectiveness of medicine use:** workshops and pharmacy tour for the general public

Location: P1 lecture room lobby at FFA and Pharmacy Mirje

The activities consist of three stations:

Activity	Content	Place	Duration	Time	Audience
Proper use of inhalers	Demonstration and practical approach to proper use of inhalers	P1 lecture room lobby	20 min	17:00-22:00	max 10 at once
Proper blood pressure	Demonstration and practical approach to	P1 lecture room lobby	20 min	17:00-22:00	max 10 at once

measureme nt	proper blood pressure measurement				
Pharmacy tour	Touring the pharmacy premises and preparation of a cream	pharmacy Mirje	30 min	18:00, 19:00, 20:00	max 15 at once

Objectives: to present proper application of inhalers as an example of a safe and effective medicine use challenge. At the same time present the findings of Department of Social Pharmacy research that has evaluated the most commonly encountered difficulties when using inhalers. Additional objective is to demonstrate proper blood pressure measurement with hands-on approach. The last objective is to present pharmacy premises and familiarize participants with a simple cream preparation at a pharmacy.

Audience: children and lay public