

Cervical cancer is the second most prevalent cancer affecting women across the world. Its main cause is human papilloma virus (HPV), which is observed in over 90% cases. The most common HPVs in women are types 16 and 18, which are also the most oncogenic. The ubiquity and the global scale of HPV infections are the reasons for searching pharmacological compounds tackling the virus infection. One of the sources of such substances is greater celandine (*Chelidonium majus* L.) – a medicinal plant which for centuries have been used in folk medicine to treat warts, papillae, and condylomas, which are visible symptoms of HPV infection. The plant produces viscous, yellow fluid called milky sap or latex, which is a rich source of biologically active compounds. Although, the latex of *C. majus* is implied to have antiviral, antibacterial, and anti-inflammatory activities, the molecular mechanism behind these properties is not fully understood.

The proposed project aims for a better understanding of molecular mechanism behind the antiviral activity of *C. majus* latex, with particular interest of latex proteins and their role in this action. The effect of three types of samples (crude latex, latex lacking proteins, and latex lacking low-molecular compounds) on human papilloma virus infection, will be assessed. Additionally, the effect of latex proteins on HPV replication will be determined and their interaction with viral RNA will be examined. Furthermore, immunostimulating properties of *C. majus* latex fractions will be assessed. The project results will help to understand the antiviral mechanism of action of *C. majus* latex and will provide new insights into the plant immune system. Data obtained from the project can potentially aid the research and production of plant antiviral drugs.