DESCRIPTION FOR GENERAL PUBLIC

Preeclampsia is one of the most important complications in pregnancy and is a threat to the health and life of women and fetal. The prevention and treatment of preeclampsia is an important problem in the world, as evidenced by thousands of publications on this subject appearing every year.

Generally, preeclampsia occurs after 20 weeks of gestation and is associated with high blood pressure and a high amount of protein in the urine. It is known that preeclampsia is related to placental dysfunction and disturbed vascular growth (angiogenesis). Although preeclampsia is a very dangerous disease, no preventive or therapeutic strategy is yet available. Currently, a low dose of aspirin is recommended to reduce the risk of preeclampsia. Therefore, we think it is worth examining dietary sources of salicylates in preeclampsia development and placenta angiogenesis. To our knowledge, no one has analyzed the association between the level of salicylates in diets and the occurring and development of PE.

We want to evaluate the influence of dietary salicylates on preeclampsia development and on placenta angiogenesis. In this project, it is planned to carry out animal study and human study. In the animal model, we can control conditions, and also we can compare the dietary salicylic acid results to the aspirin effect. In the non-invasive study with pregnant women, we want to determine the association between maternal salicylates intake and placental angiogenesis and the risk of preeclampsia development. Blood, placenta samples, and urine will be taken in both studies. The concentration of salicylates, angiogenesis parameters, and the vascularization process of the placenta will be measured in human and animal samples.
To access salicylates intake by pregnant women during pregnancy we will prepare an original database on salicylates content in food and this will be an additional important achievement of this project.

The results of this project will enable the development of dietary recommendations for the prevention and treatment of preeclampsia. Moreover, the results of this study may be useful in lowering the cost of maternal and fetal complications from preeclampsia and the cost of their hospitalization. Therefore, the results of this project may have both medical and economic importance in healthcare.