Project title: HUMNap – Air Pollution and Human Biomarkers of Effect

Project type: National research programme (Research project)

Project funding: Croatian Science Foundation (Hrvatska zaklada za znanost, https://hrzz.hr/)

Project duration: July 2021. – June 2025.

Project leader: Goran Gajski (Institute for Medical Research and Occupational Health (IMI), https://www.imi.hr/)

Participants:

Croatian team: Goran Gajski (COST Member, IMI), Marko Gerić (IMI), Mirta Milić (IMI), Vilena Kašuba (IMI), Gordana Pehnec (IMI), Silvije Davila (IMI), Ivana Jakovljević (IMI), Ante Cvitković (ZZJZBPZ), Mandica Sanković (Grad Vinkovci), Antun Šumanovac (OBVK)

Switzerland team: Irina Guseva Canu (COST Member, Unisanté), Nancy Hopf (Unisanté), Pascal Wild (Unisanté)

Short project description:

HUMNap will determine possible associations between the air pollutants and biomarkers of exposure and early biological effect. The project will start with investigations at multiple locations with different air pollution levels and origin followed by measurement of various environmental airborne pollutants. The next step will be a detailed assessment of different biomarkers of exposure and early biological effects (genomic instability and oxidative stress) in human populations living in those locations. HUMNap will promote state-of-art techniques and research approaches to develop risk assessments of human exposure to airborne pollutants. The results from HUMNap will demonstrate how airborne pollutants affect early molecular events important for disease development in different human cells. It will also provide an assessment of cancer risk among human populations affected by polluted urban areas. Moreover, HUMNap aims to draw the attention of many stakeholders such as leading scientists, policy makers, industry, and the public in order to raise awareness regarding air pollution and to develop monitoring regimes. Finally, HUMNap will provide new datasets necessary for scientifically based risk assessments of human populations exposed to urban air pollution.