UP-5: "Ecological-Epizootological surveillance for identifying the prevalence and genetic diversity of Crimean Congo hemorrhagic fever virus, hantaviruses, tick-borne encephalitis virus, pseudorabies virus, and *Leptospira* spp. in Ukraine"

Work Plan

Task #	Description	Expected Outcome	Responsible Party	Quarter
1	Rodent/tick surveillance & sample collection/data analyses of Ukraine.	Knowledge of major reservoirs for hantaviruses and additional knowledge of endemic hotspots for viruses targeted.	Dr. Jonsson, UofL Dr. Mills, Emory U Dr. Sytiuk, IVM Dr. Ukhovskyi, IVM	1-12
1.1	Rodent surveillance of Odessa Oblast (Baltskyi rayon, Kiliyskyi rayon, and Tatarbunarskyi rayon), Volyn' Oblast (Lutsk Rayon), and Crimea (Bakhchisaray Rayon, Alushta and Gurzuf areas).	Knowledge of major reservoirs for hantaviruses and additional knowledge of endemic hotspots for viruses targeted.	Dr. Jonsson, UofL Dr. Mills, Emory U Dr. Sytiuk, IVM Dr. Ukhovskyi, IVM	1-12
1.2	Tick surveillance of Odessa Oblast (Baltskyi rayon, Kiliyskyi rayon, and Tatarbunarskyi rayon), Volyn' Oblast (Lutsk Rayon), and Crimea (Bakhchisaray Rayon, Alushta and Gurzuf areas).	Knowledge of major vectors for CCHFV and TBEV and additional knowledge of endemic hotspots for viruses targeted	Dr. Jonsson, UofL Dr. Mills, Emory U Dr. Sytiuk, IVM Dr. Ukhovskyi, IVM	1-12
2	Develop and implement modern molecular diagnostic tools for detection of EDPs.	Knowledge on how to develop and optimize diagnostic assays to increase sensitivity and specificity of detection of EDP.	Dr. Schmaljohn	1-12
2.1	Training in the development of qRT-PCR approaches and tools for discovery of prevalence of zoonotic viruses.	Technical skills in qRT-PCR of viruses	Dr. Jonsson, UofL Dr. Schmaljohn	1-2
2.2	Assessment of samples using qRT-PCR and ELISA for discovery of prevalence of zoonotic viruses and *Leptospira spp.*	Technical skills in qRT-PCR and ELISA of viruses	Dr. Schmaljohn	3-12
3	Training on sequence approaches, application and their analyses.	Training and technical skills in RT-PCR, PCR, sequencing and sequencing analyses	Dr. Jonsson, UofL	3-12

4.	Train scientists in GIS methodology and applications.	Technical skills in GIS analysis	Bezymennyi, IVM	2
4.1	Train scientists in basic GIS tools and analysis of the results.	Technical skills in using GIS tools		5
4.2	Development of protocols for the integration of handheld GIS receivers in the field collecting samples.	Technical skills in collecting, importing, cleaning, and sorting the GPS data	Bezymennyi, IVM	9
4.3	Improving opportunities for creating high-quality maps and graphs for reports and publications, geospatial simulations of the dynamics of epizootic process.	GIS database and maps developed	Bezymennyi, IVM	13