



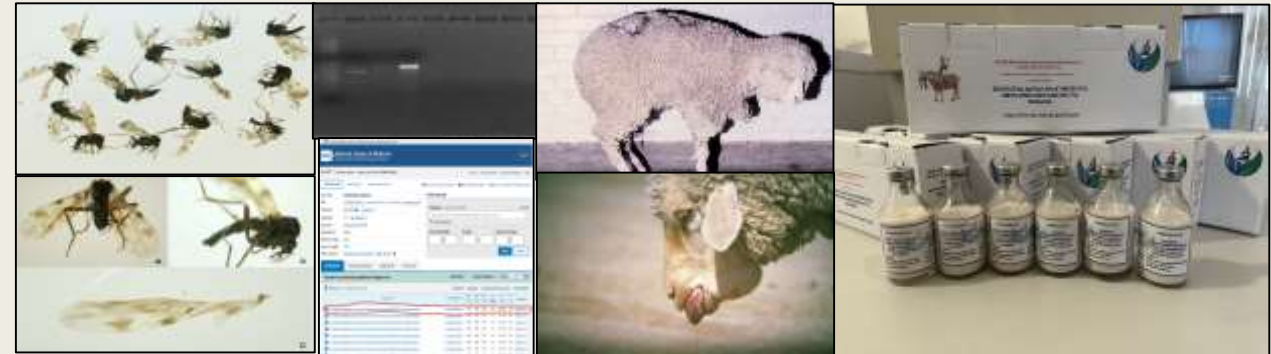
# IRN AP19676490 “Bluetongue: Primary Vectors, Distribution Area, and Genetic Characterization of the Virus Circulating in Kazakhstan, and the Introduction of a Specific Preventive Measure”

Project Leader: Zhugunisov K.D., PhD



## Purpose of the work

Detection of the bluetongue virus, identification of its main vectors, mapping the distribution area, and genetic characterization of the virus circulating in Kazakhstan. Implementation of an inactivated vaccine into veterinary practice in Kazakhstan for specific bluetongue prevention.



## Tasks

- ✓ Collection of samples from animals and trapping of Culicoides midges;
- ✓ Detection of antibodies and antigens to BTV in cattle and small ruminants;
- ✓ Morphological and genetic identification of Culicoides midge species;
- ✓ Isolation of the virus from positive samples collected from various regions of Kazakhstan and from those stored in the Microorganism Collection;
- ✓ Typing and sequencing of BTV strains circulating in Kazakhstan;
- ✓ Introduction of an inactivated vaccine into Kazakhstan's livestock industry.

## Expected results

The results of the research conducted within the framework of the project will be published in one article in a peer-reviewed scientific journal indexed in the Science Citation Index Expanded (Web of Science) and ranked in the first (Q1) or second (Q2) quartile by impact factor, and/or having a CiteScore percentile of no less than 65 in the Scopus database. In addition, one article will be published in a foreign or domestic journal recommended by the Committee for Quality Assurance in the Sphere of Education and Science of the Republic of Kazakhstan (CQASES). The serotype of the bluetongue virus circulating in Kazakhstan will be determined, and its genetic characteristics will be studied. The main vectors of the virus will be identified, including their species composition and vector competence of Culicoides spp. inhabiting Kazakhstan. A field trial of a domestically produced inactivated bluetongue vaccine will be conducted for its subsequent implementation into veterinary practice in Kazakhstan.