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To all interested parties – to whom it may concern

PUBLIC STATEMENT

Occurrence of a previously unregistered viral disease in dogs caused by an amdo-parvovirus (amdovirus) genetically most similar to the raccoon dog and foxes amdo-parvoviruses

Dear Sir/Madam,

We hereby inform you of the occurrence of a previously unregistered disease in dogs, which, up to this moment, has been established only among individuals of the Dobermann breed. Based on data from epizootiological, clinical, pathomorphological, and laboratory investigations, the infection has been established in the population of Dobermann dogs in the territory of the Autonomous Province of Vojvodina and the City of Belgrade, and most likely also exists in other parts of Serbia.

The disease, which is of a multi-systemic nature and is accompanied by both milder and more severe clinical manifestations, has caused great concern among owners and breeders of Dobermann dogs, who are seeking information and guidance on what to do and how to behave. Recognizing our role in the entire case, and with the aim of preventing the spread of various "half-information," i.e. unverified information and misinformation that can be found on social media, we are publishing this statement, by which we wish to inform the professional community and all interested parties about the facts that we have indisputably established so far during our professional, specialist, and scientific research work.

Experts from the Scientific Veterinary Institute "Novi Sad," in cooperation with the competent national veterinary inspection, were officially involved in the epizootiological surveillance and laboratory diagnosis of the occurrence of disease in Dobermann dogs at a dog training facility in the village of Čortanovci, Municipality of Indija, beginning in March 2026. We do not have information as to whether this was the first case of disease in Dobermanns in Serbia, but it was the first case under our supervision. During the continuous epizootiological and clinical monitoring of the development of the infection/disease at the mentioned location, numerous biochemical, hematological, serological, microbiological, virological, pathomorphological, and pathohistological examinations were carried out. Based on all laboratory diagnostic findings collected so far and the conducted epizootiological, clinical, and other investigations, we can emphasize the following:

Etiology of the disease

Laboratory investigations, ranging from biochemical, hematological, and serological to microbiological and virological examinations, excluded all microbiological agents that had so far been considered



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relevant based on the clinical symptoms occurring in the affected individuals. Leptospirosis, leishmaniasis, adenovirus and canine distemper, as well as canine coronavirus, parvovirus and herpesvirus infections, and influenza, that is, all infectious diseases known to us that occur in dogs and may have similar clinical-pathological manifestations, were excluded. Given the obtained negative findings, metagenomic investigations were performed at the Department of Virology (using third-generation sequencing), that is, sequencing the complete genomic content in organ samples from several severely ill and subsequently deceased Dobermann dogs. The investigation established that a surprisingly high percentage of all detected viral genomic (nucleotide) sequences (99%) belonged to a single virus, which was assembled using bioinformatic tools into a complete genome of 4,799 nucleotides. By comparison with available data in the gene bank (NCBI GenBank, USA), the detected virus was confirmed to belong to the genus *Amdoparvovirus*. The similarity of the detected virus in Dobermanns to virus genomes available in the gene bank was highest with the genomic sequences of the raccoon dog and fox amdoparvovirus ("Raccoon dog and fox amdoparvovirus" – RFAV) and amounted to 97%, indicating the origin and similarity of the detected virus, which was distinguished as a separate strain within the RFAV species. The complete genome of the detected virus was subsequently published in the gene bank (NCBI GenBank, USA) under accession number PZ348355. Based on knowledge of the genome of the newly detected virus, as well as data available in the literature, a molecular diagnostic PCR test was designed for the detection of this virus. During and after its laboratory validation, this test confirmed all clinically and epizootiologically related cases as positive for the presence of RFAV, while healthy dogs and dogs that were not epizootiologically connected with the affected individuals were confirmed as negative. In addition, all animals of other animal species that were in contact or cohabitation with the diseased animals or that were not in contact tested negative. In this way, the detected virus was additionally confirmed as the causative agent of the identified health problems in Dobermanns.

Epizootiology

Through the epizootiological investigation, it was established that the disease at the mentioned dog training facility first appeared in the second half of December 2025, following the importation of Dobermanns from Russia. Approximately ten days after their arrival, the first imported female dog, aged seven months, became ill with characteristic symptoms, after which the infection spread to other Dobermanns that had been in contact with this female. Following the detection of the causative agent and the development of the PCR test, it was established that viremia in infected individuals persists for a long period of time, that is, for several months or longer (the exact duration is currently unknown), while the presence of the viral genome was established in various secretions and excretions. A particular problem from the standpoint of maintaining and spreading the infection is posed by subclinically infected individuals, which shed the virus but do not exhibit an obvious clinical picture, or exhibit one so mild that it goes unrecognized. In addition, current investigations and the available data do not indicate any zoonotic potential of the virus.

Clinical presentation and pathology

Based on the data collected during clinical examinations, pathomorphological, histopathological, and other laboratory investigations, this is a multi-systemic disease of a chronic course, rather than a peracute or acute disease. The incubation period is variable and may range most commonly from two weeks to two or more months. The clinical syndrome observed in all infected dogs examined so far includes bilateral mucopurulent conjunctivitis with ocular discharge, which may be accompanied by the same type of nasal discharge, marked scleral and conjunctival injection, progressive weight loss despite preserved appetite, poor coat quality, and an altered biochemical liver profile with multiple increases in transaminase values. Among the other symptoms, a larger number of dogs exhibited corneal opacity described as "blue eye," jaundice, dry and hyperkeratotic footpads (hard pad) and a hyperkeratotic nasal planum, on which fissures may or may not occur, while cough and arthritis were also observed, and in the terminal stage, some dogs developed neurological symptoms (epileptiform seizures and ataxia accompanied by hemiparesis). Terminal cachexia and failure of various organs or organ systems are the

most common causes of death or euthanasia of animals in the terminal stages of the disease. Pathomorphological examination established that numerous parenchymatous organs were affected by visible lesions, with the most pronounced changes observed in the liver, kidneys, and pancreas.

Disease diagnostics

Based on knowledge of the genome of the detected amdoparvovirus, as well as data available in the literature, a molecular diagnostic PCR test was designed for the detection of a portion of the conserved VP2 gene of this virus, which, after validation of the method in the laboratory, was introduced as a commercially available test in the diagnostic portfolio of the Scientific Veterinary Institute "Novi Sad". Using the aforementioned PCR test, all samples originating from the clinically confirmed cases of the disease identified up to that point were confirmed as positive. As previously stated, all tested healthy dogs, dogs of other breeds, and dogs that were not epizootiologically connected with the infected Dobermanns, as well as individuals of other animal species yielded negative PCR test results. In infected individuals, the presence of the virus was established in anticoagulated blood (EDTA), urine, kidneys, spleen, liver, brain, lungs, testicles, semen, ileocecal lymph nodes, and oropharyngeal, rectal, as well as conjunctival swabs, indicating a systemic distribution of the pathogen. At this moment, the aforementioned PCR test is the only diagnostic test by which the diagnosis of the disease can be confirmed with certainty. Since infected animals, which may or may not show clinical signs of the disease, have been found to exhibit viremia (the presence of the virus in the blood) over a prolonged period of time (at this moment we can confirm that this is at least 3 months, established in more than one affected animal), blood collected with EDTA anticoagulant is the sample of choice when submitting material for diagnostic testing to determine the presence of infection in animals.

Diagnostic testing can be performed at the laboratory of the Department of Virology of the Scientific Veterinary Institute "Novi Sad" (contact: Department for Sample Reception: +381214895335; prijemno@niv.ns.ac.rs; with the subject of email Amdoparvovirus).

Prevention and control of the disease

Since this is a newly discovered disease in dogs, there is currently no specific prevention of the infection that would include active immunization through vaccination, nor has a set of preventive measures and procedures been developed that would reliably prevent the transmission and spread of the virus. General biosecurity measures, which include diagnostic testing of susceptible individuals for the presence of the virus, avoiding contact between infected and non-infected dogs, controlling the movement of infected animals, postponing or suspending events at which large numbers of dogs gather, or allowing participation only of dogs with a negative PCR result (not older than 7 days) and without the previously described clinical signs, represent the basis for preventing the spread of the infection in the population of susceptible dogs.

We emphasize here that, so far, the infection has been confirmed only in Dobermann dogs. At this moment, we have no evidence of the occurrence of infection in other breeds, but caution dictates that particular attention should also be paid to the other breeds belonging to the Pinscher group. Furthermore, epizootiological investigations indicate that the virus is resistant in the external environment and can also be transmitted indirectly via people, equipment, and vehicles.

Breeders and owners are advised to reduce contacts between different breeding kennels to the minimum necessary. Before introducing new individuals into a breeding kennel free of infection, it is mandatory to require that the dog has a negative PCR test result and that the breeding kennel of origin has been tested and confirmed free of the virus. The newly introduced individual should be placed in quarantine for 21–30 days, tested, and only after obtaining a negative PCR test result introduced among the other dogs.

Considering that the causative agent is a virus belonging to the family *Parvoviridae*, it can, with a high degree of certainty, be considered highly resistant in the external environment; therefore, proven disinfectants based on potassium peroxymonosulfate (e.g., *Virkon S*) should be used at a working

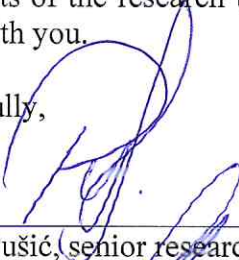
concentration of 2%, with mandatory prior mechanical cleaning and sanitary washing of surfaces. We recommend a contact time of at least 10 minutes. As an alternative, sodium hypochlorite may be used. The demonstrated presence of viral genome in the urine of infected dogs at a high concentration indicates that surfaces contaminated with urine should be treated with particular attention.

Instead of a Conclusion

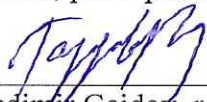
At present, the Institute's research team is working on a more detailed investigation of the previously mentioned epizootiological, diagnostic, pathological, histopathological, and many other aspects of this health problem in dogs (Dobermann breed), with the aim of achieving a better understanding of its pathogenesis and risk factors. In parallel with this, intensive research has been undertaken focusing on the optimization of diagnostic methods, including the development of additional tests for the detection of the pathogen itself, as well as the development and establishment of a serological test for determining the presence of specific antibodies. Such tests would provide not only an additional diagnostic test for confirmation of disease cases, but also additional information for monitoring infection in animals, and would represent a suitable tool for epizootiological surveillance of virus circulation in the dog population.

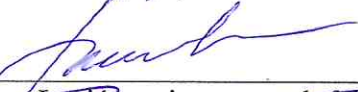
The results of the research that we obtain in the coming period will, as we have done so far, also be shared with you.

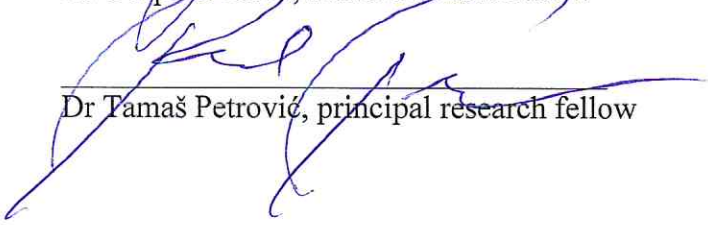
Respectfully,


Dr Ivan Pušić, senior research associate

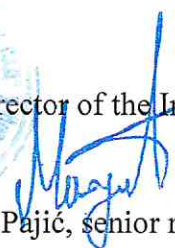

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