VET EXPERT
BASED ON EVIDENCE

CATS

Anti-Catarrhal Support

ACATAVIR

INNOVATIVE SUPPORT IN "CAT FLU"

SCIENTIFICALLY DEVELOPED FORMULA BASED ON PSSNa – SUPPORT FOR CATS WITH CALICIVIRUS AND HERPESVIRUS INFECTIONS

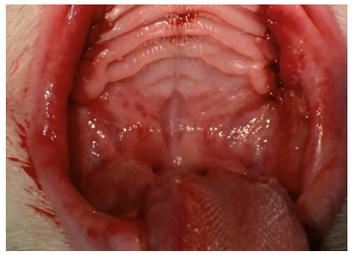
"CAT FLU" – ONE OF THE MORE COMMON CAUSES OF DEATH IN CATS IN SHELTERS AND CATTERIES

Upper respiratory tract disease (URTD) in cats, also known as "cat flu", **is a highly contagious, polyetiological disease in the development of which** both viruses and bacteria are involved.

The main aetiological factors are **feline herpesvirus type 1 (FHV-1) and feline calicivirus (FCV)**, often accompanied by bacterial infections (*Chlamydophila felis, Mycoplasma felis, Bordetella bronchiseptica*).

Vaccinations against herpesvirus and calicivirus, which constitute a fundamental element of disease prevention, although they do not prevent infection, latency or viral carriage, significantly reduce the risk of disease occurrence and mitigate its course.

Did you know that...
as many as 90% of cats are carriers of FHV, and 25–40% are carriers of FCV?



EPIDEMIOLOGY AND TRANSMISSION

Clinical signs occur in over 90% of cats during active infection. After the acute phase subsides, over 80% of cats remain asymptomatic carriers, of which 45% may experience spontaneous viral reactivation.

ROUTES OF TRANSMISSION:

- direct contact with an infected cat and its secretions (especially from the eyes and oral cavity),
- aerogenic route (coughing, sneezing, nasal discharge),
- indirect contact through shared use of litter trays or bowls,
- vertical infections – transmitted from the mother to kittens.

RISK FACTORS:

- keeping cats in large groups with a high degree of density (shelters, hospitals, breeding facilities),
- insufficient hygiene of cages and stalls,
- exposure of animals to stress (transport, procedures, environmental changes, conflicts between cats),
- reduced immunity, including the use of glucocorticosteroids or coexisting diseases.

PATHOGENESIS OF LATENT INFECTION AND REACTIVATION OF FHV-1

FHV-1 is characterised by a unique biological strategy involving entry into a state of latency. The viral genetic material persists in infected host cells, mainly in neurons of the trigeminal ganglia and – less frequently – in corneal stromal cells, where it remains in a "dormant" state.

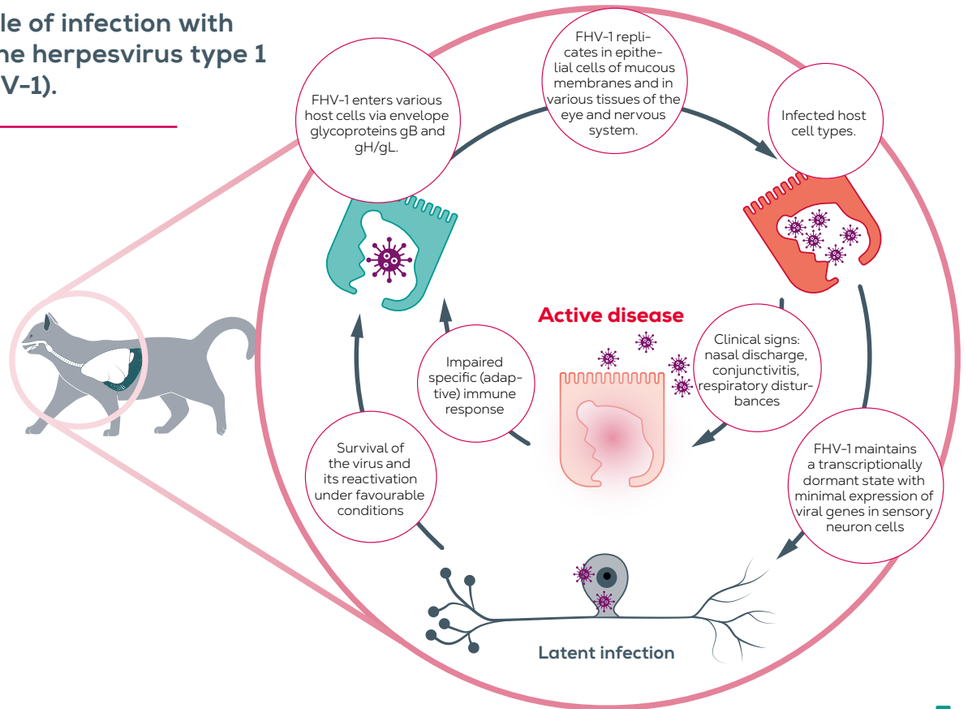
During the latent phase, the virus does not replicate, does not cause clinical signs of disease and is not shed into the environment. This state may persist for years.

Reactivation of latent infection into the productive phase may occur under the influence of:

- stress (e.g. change of environment, excessive animal density, stay in a shelter, veterinary procedures),
- coexisting diseases or injuries,
- parturition and the periparturient period (in queens – possibility of infecting offspring),
- therapy with glucocorticosteroids or other immunosuppressive factors.

The reactivation phase usually lasts about 2 weeks. During this time, cells produce virions that may cause clinical signs of disease and are shed into the environment, infecting other cats. As the immune response increases, the virus once again enters a state of latency. This cyclical strategy allows FHV-1 to avoid complete elimination by the immune system, making eradication of the infection practically impossible.

Cycle of infection with feline herpesvirus type 1 (FHV-1).



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The predominant symptoms of “cat flu”:

- fever, apathy, salivation, loss of appetite,
- ulceration of the oral mucosa leading to necrosis (the most characteristic sign) – located mainly on the margins of the tongue, less frequently on the palate and the inner surface of the cheeks,
- sneezing, nasal discharge – initially serous–mucoid, then mucopurulent, causing breathing difficulties (especially in brachycephalic breeds),
- conjunctivitis with exudate,
- marked pain when taking food and water.

Complications of “cat flu”:

Under poor environmental conditions, with increased stress or immunosuppression, secondary bacterial infections may lead, among others, to:

- pneumonia (potentially fatal) with accompanying general signs,
- chronic, recurrent inflammation of the paranasal sinuses,
- chronic inflammation of the upper respiratory tract,
- chronic lymphoplasmacytic gingivitis,
- corneal ulcers and sequestration.

Special situation of neonates and kittens

Kittens born to non-immunised mothers (young, unvaccinated queens) that become infected with FCV or FHV-1 at up to 2–3 weeks of age are at risk of a very severe course of disease and high mortality. The absence of colostral antibodies in the mother prevents the transfer of passive immunity to the offspring, which significantly increases the risk of systemic infection and death.

DIAGNOSTICS

Diagnosis of “cat flu” is based on **thorough clinical examination of the patient, assessment of clinical signs and performance of additional tests that allow confirmation of the presence of the main viral agents** – feline herpesvirus type 1 (FHV-1) and feline calicivirus (FCV).

The material most commonly used for testing consists of swabs from the conjunctival sacs, nasal cavity and oral cavity.

The most important available diagnostic tools:

- **Rapid immunochromatographic tests**, detecting viral antigens, are useful as screening tests. They are characterised by ease of use and straightforward interpretation, and they provide results within a few minutes.
- **Real-time PCR (RT-PCR)** – he diagnostic gold standard, detecting viral genetic material. It enables differential diagnosis of FHV-1 and FCV as well as identification of the most common coexisting or complicating pathogens, such as *Chlamydophila felis, Mycoplasma felis* or *Bordetella bronchiseptica*.

CURRENT THERAPEUTIC STRATEGIES

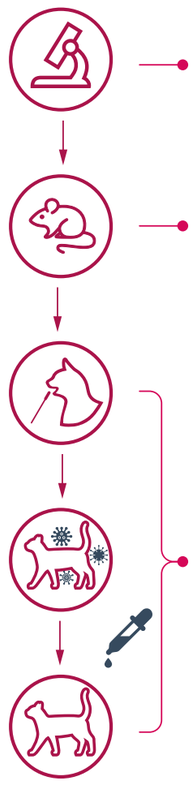
In veterinary medicine there is no drug that completely eliminates infection with FHV-1 or FCV; therefore, treatment of cats with signs of “cat flu” is based mainly on symptomatic and supportive therapy, including:

- **combating secondary bacterial infections**, both local (antibiotic eye drops) and systemic (antibiotics administered orally or by injection),
- use of **non-steroidal anti-inflammatory drugs**,
- **improvement of breathing** through inhalations,
- **support of the immune system** through the use of its natural stimulators, e.g. beta-glucan,
- **provision of** a properly balanced, high-calorie diet, combined with adequate hydration (particularly important in kittens and older individuals),
- **ensuring optimal temperature** and ventilation in the room where the sick animal is kept.

BREAKTHROUGH SUPPORT FOR THE TREATMENT OF “CAT FLU”

In 2019, poly(styrene 4-sulfonate) PSSNa was identified, a compound based on a polymeric mechanism of action that makes it possible to inhibit infection at various stages, significantly reducing virus transmission in high-risk populations.

Its effectiveness was confirmed in studies[1]:



in vitro – against laboratory and clinical strains of viruses,

in vivo a **high safety profile** was confirmed,

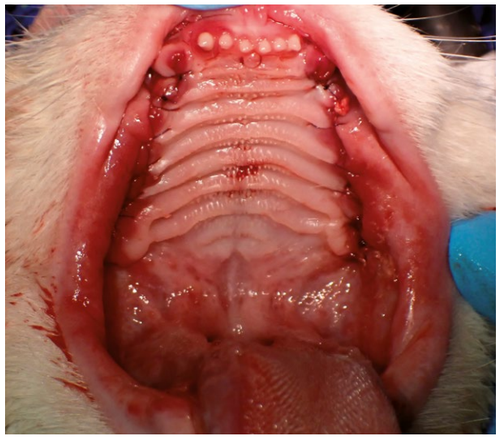
field studies in cats (randomised, double-blind, placebo-controlled) – **a reduction in the amount of viral genetic material (PCR) and improvement of oral cavity lesions were demonstrated, with simultaneous symptomatic treatment.**

PSSNa AS A SAFE MOLECULE SIGNIFICANTLY REDUCING VIRAEMIA IN CATS

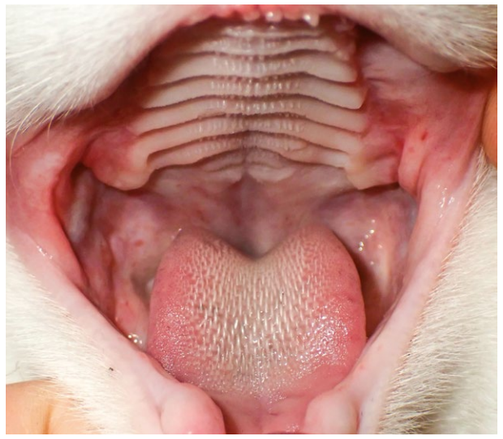
The conducted studies proved[2] that PSSNa acts effectively through:

- inhibition of viral replication (FCV),
- inhibition of virion entry into host cells (FCV, FHV-1).

PSSNa



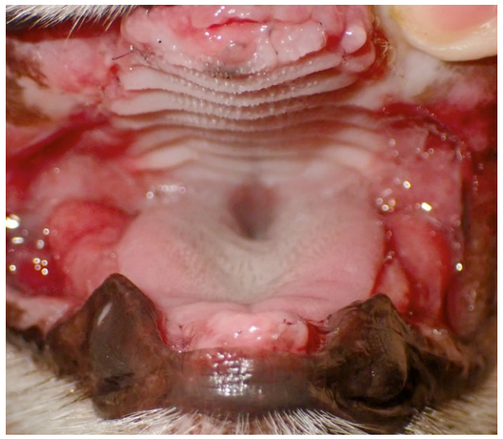
Day 0



Day 28

Placebo

Day 0



Day 28

THE FIRST SUCH SUPPORTIVE PRODUCT FOR “CAT FLU”

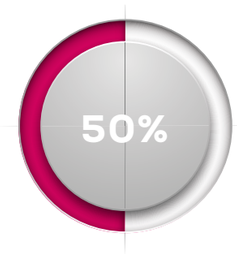
ACATAVIR is an innovative, highly specialised formula based on PSSNa, a molecule:

- √ with targeted, selective activity against feline calicivirus and herpesvirus,
- √ exhibiting local action,
- √ supporting the treatment of “cat flu”,
- √ supporting convalescence.

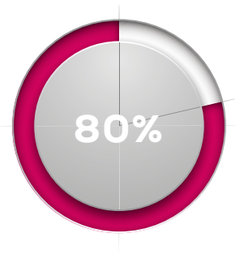
EFFICACY PROVEN IN STUDIES

ACATAVIR is a preparation for cats in the form of a gel, intended for topical application to the gums. It is based on a molecule with efficacy confirmed in studies – PSSNa, which in just 4 weeks significantly reduces viral load in cats ($p < 0.001$), more markedly than placebo ($p < 0.012$)[2].

After 4 weeks of using PSSNa, the following were observed:



in 50% of the examined cats, a complete reduction of FCV,



in 80% of cats with gingivitis, a decrease in viral load,

in 100% of cats with gingivitis and stomatitis, a decrease in viral load.

The study in cats was performed using the real-time PCR method, using swabs taken from the oral cavity and pharynx.

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ACATAVIR

INNOVATIVE SUPPORT IN "CAT FLU"

SAFETY AND EASE OF USE

ACATAVIR is characterised by:

- √ high safety profile,
- √ gel formulation – better adhesion, greater effectiveness,
- √ silent, convenient application – without pain and stress for the animal,
- √ full control of gel flow pressure,
- √ topical application to the cat's gums using the supplied applicator,
- √ comfort of use in the clinic and at home.

Anti-Catarrhal Support
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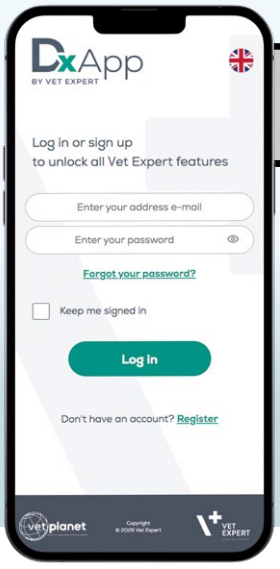
THE FIRST SUCH SUPPORTIVE PRODUCT FOR "CAT FLU"

PATENTED FORMULA BASED ON PSSNa

EFFICACY PROVEN IN STUDIES

SAFETY AND EASE OF USE

NEW VET EXPERT COMPLEMENTARY SUPPORT



NEW! DxApp BY VET EXPERT

Discover our web application – a modern solution created for veterinarians working with Vet Expert diagnostic products.

STEP INTO MODERN COMFORT – RUN VET EXPERT RAPID TESTS IN THE APP.

1. A. Synowiec, M. Pachota, M. Krejmer-Rabalska, D. Ziemann, K. Szczubiałka, M. Jank, Ł. Rabalski, M. Nowakowska, J.P. Gawor, K. Pyrć; "Antiviral effect of poly(styrene 4-sulfonate) (PSSNa) on feline calicivirus oral infections in cats – field study"; 2026.
2. A. Synowiec, I. Gryniuk, M. Pachota, Ł. Strzelec, O. Roman, K. Kłysik-Trzciańska, M. Zając, I. Drebot, K. Gula, A. Andruchowicz, Z. Rajfur, K. Szczubiałka, M. Nowakowska, K. Pyrc "Cat flu: Broad spectrum polymeric antivirals"; 2019 Oct;170:104563. doi: 10.1016/j.antiviral.2019.104563. Epub 2019 Jul 17. PMID: 31325462.

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