SERUM PREVALENCE OF ANTIBODIES TO COMMON FELID PATHOGENS IN PALLAS CATS (*OTOCOLOBUS MANUL*) FROM THE DAURIAN STEPPES, EASTERN RUSSIA

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Introduction:

Pallas' cat range

IUCN Red List

Introduction:

Pallas' cat and toxoplasmosis

Captive breeding of Pallas' cats is successful; however, there are some problems with persistent captive populations because kitten survival is low (<40%; Swanson, 1999; Kenny et al., 2002) due to susceptibility to *Toxoplasma gondii* (Dubey et al. 1988; Basso et al., 2005).

Ketz-Riley et al. (2003) hypothesized that the high frequency of *T. gondii* in captive Pallas' cats was due to immunodeficiency, perhaps because of concurrent infection with FIV.

Brown et al. (2002) showed that prevalence of antibody to *T. gondii* was 13% in wild cats in Mongolia, but 100% in cats in captivity.

Hypothesis:

Free-ranging domestic cats are the main distributors of *Toxoplasma gondii* in Daurian steppe and serum prevalence for this pathogen in domestic cats is much higher than in Pallas' cat.

Methods:

Study area

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Animals capture:

- Pallas' cat –captured by hands, 24 animals, no anesthesia, 21±5 minutes for work.

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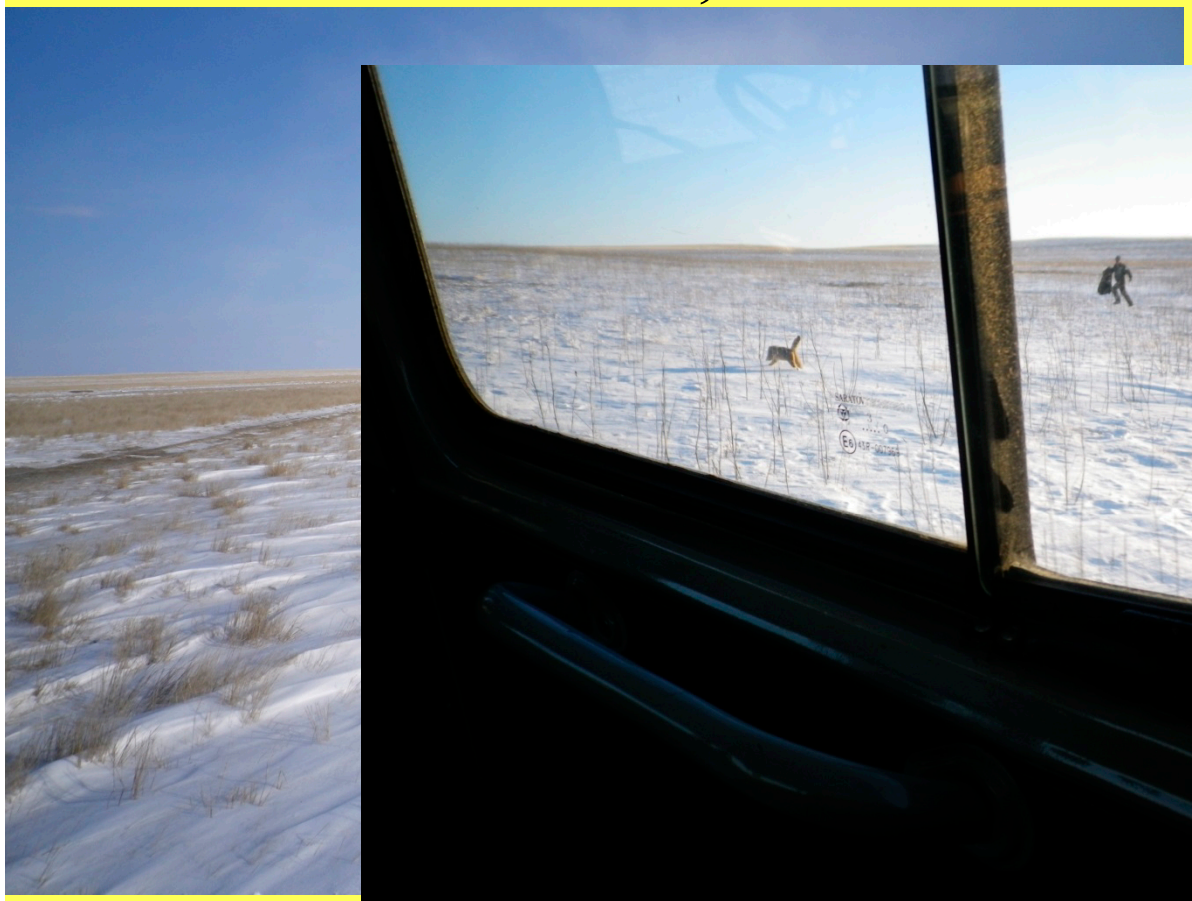

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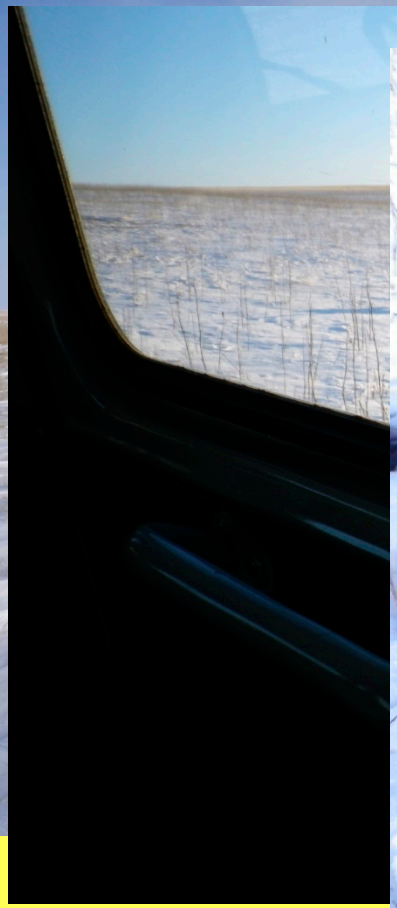


Methods:

Animals capture:

- Free-ranging domestic cats – blood sampling with owner's permission; 61 individuals (33 – village, 28 – herdsman's stations)

Methods:

Animals capture:

- Preys species (rodents and pikas) – live-trapping, 151 animals

Methods:

Lab work:

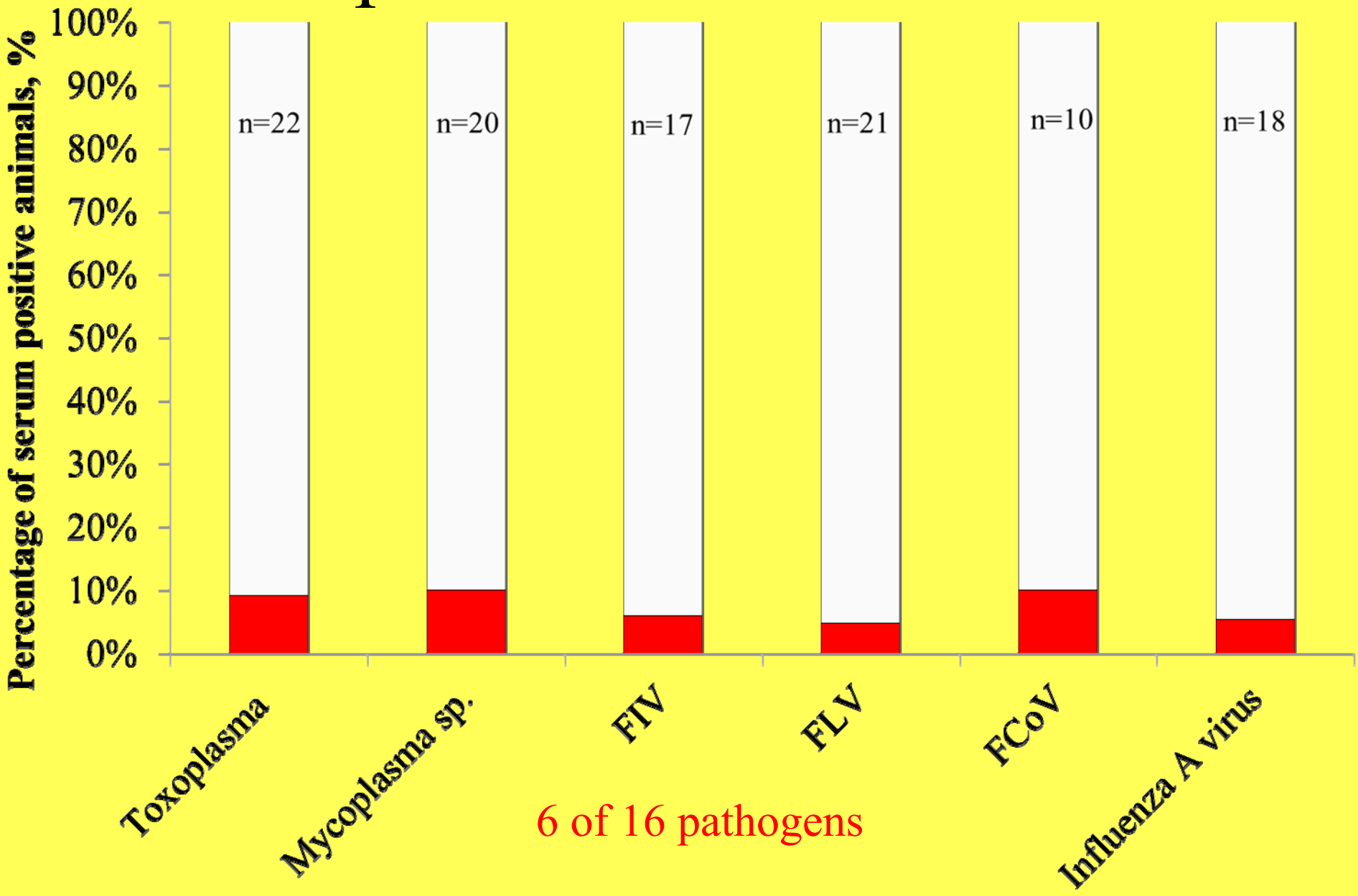
- Analysis for 16 possible pathogens:
- FHV, FCV, FIV, FLV, FCoV, CDV, FPV, pseudorabies, Influenza A virus;
- Toxoplasma gondii, Mycoplasma sp., Chlamydia sp., Coxiella burnetti; Candida sp.;
- Trichinella sp., Dirofilaria sp.

- Mainly antibodies detection (excluding FLV)

- Mainly EIA, excluding FLV, FIV, FCoV (snap-tests).

Results:

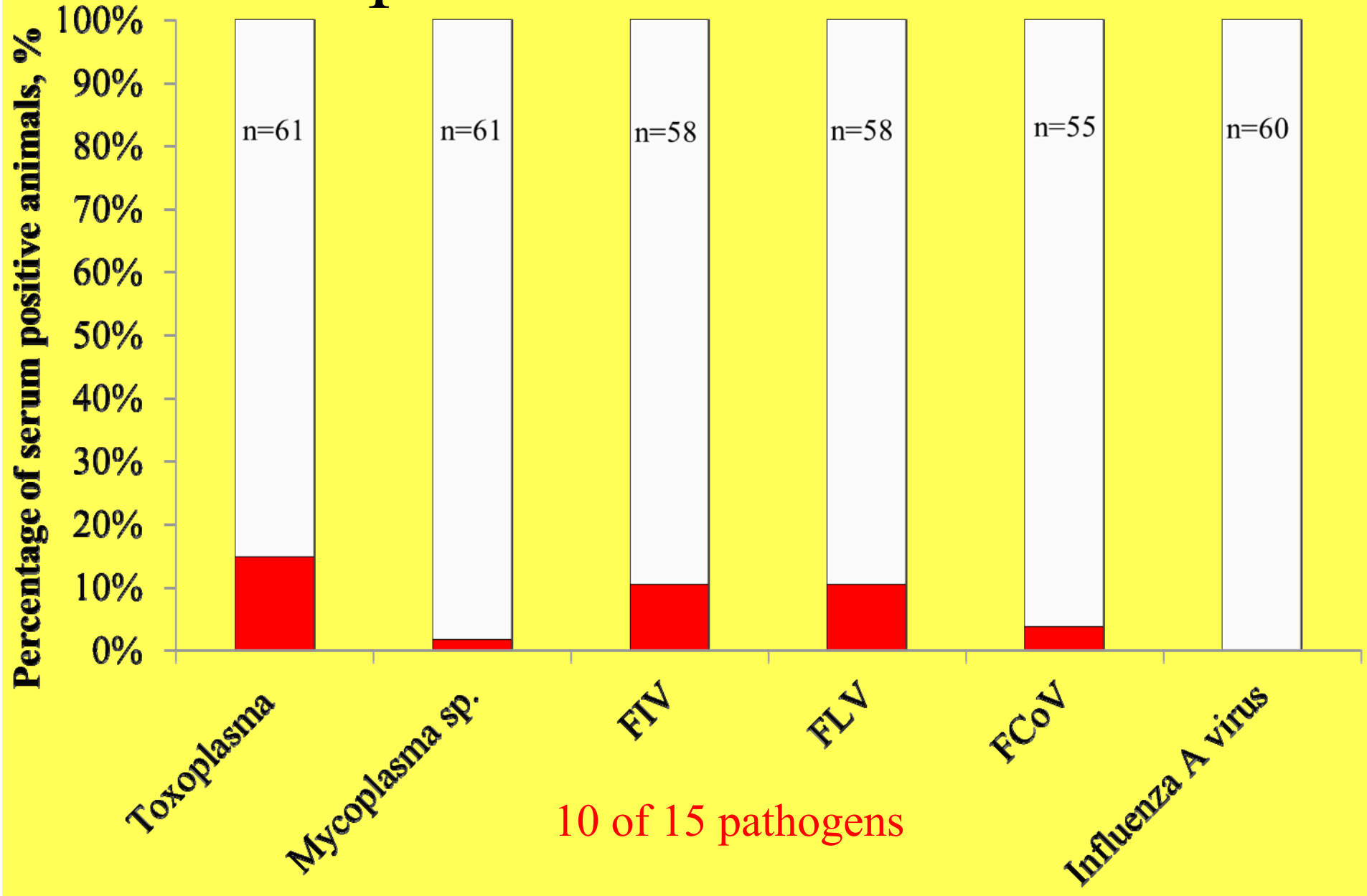
Serum prevalence in Pallas' cats



6 of 16 pathogens

Results:

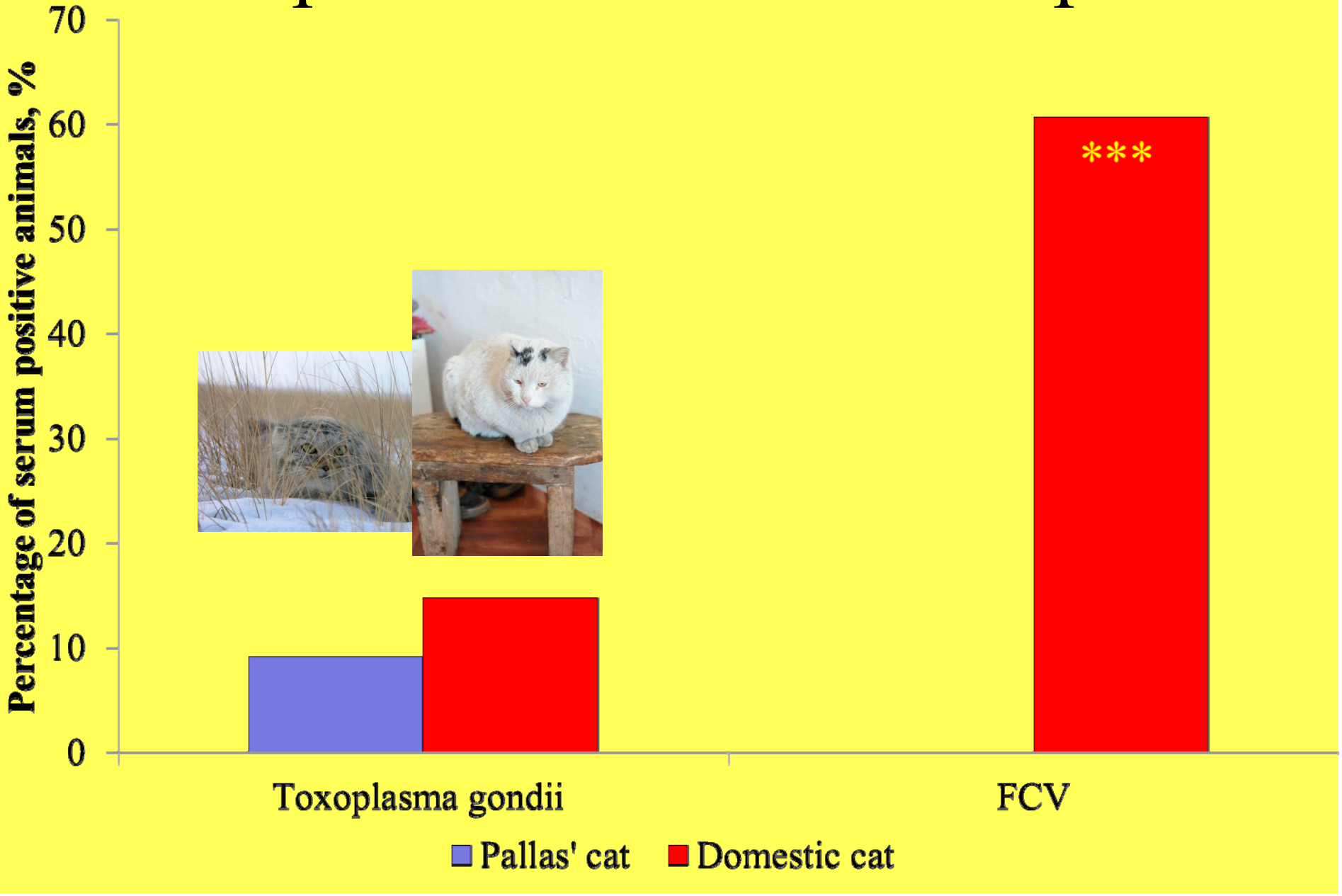
Serum prevalence in domestic cats



10 of 15 pathogens

Results:

Serum prevalence in two cat species



Results:

Serum prevalence in two cat species

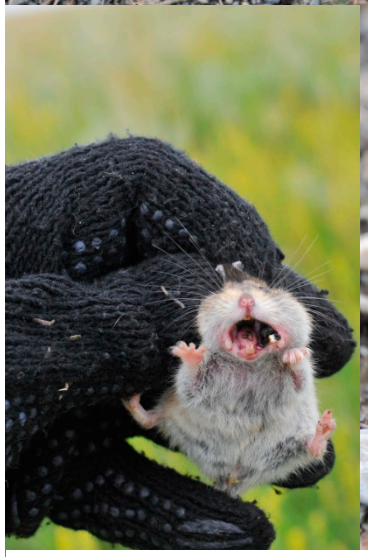
Results:

Six prey species

Mongolian vole

Mongolian gerbil

Transbaikal hamster



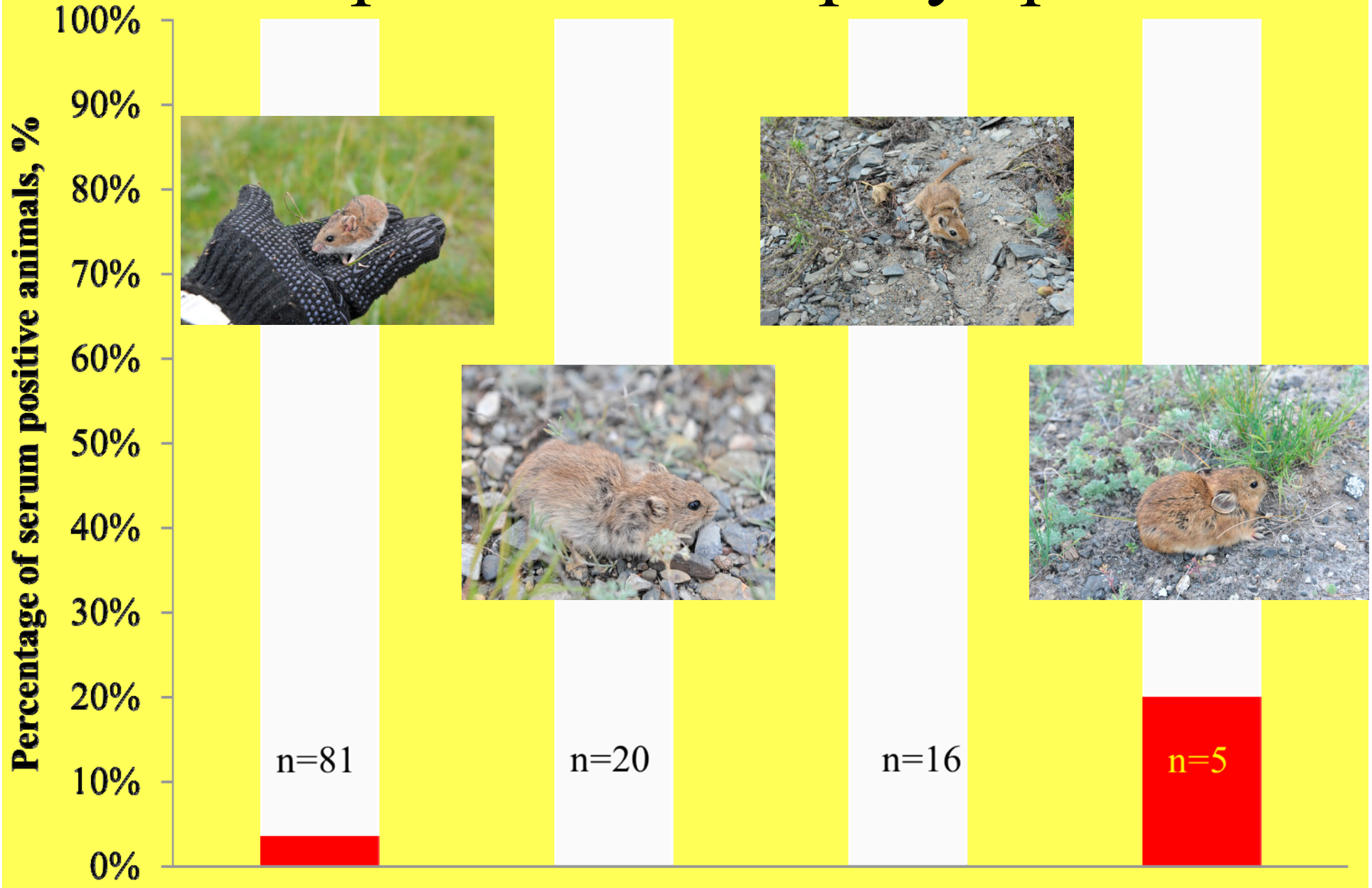
Campbell's dwarf hamster

Brandt's vole

Daurian pika

Results:

Serum prevalence in prey species



Conclusions:

Pallas' cat has been contacted with 6 of 16 tested pathogens, including *Toxoplasma gondii*

Serum prevalence for different pathogens in Pallas' cat was quite low (10% or less)

Serum prevalence for *Toxoplasma gondii* was approximately the same like in domestic cats

Rodents as prey species could not be a reservoir of *Toxoplasma gondii* in Daurian steppe

AND PIKAS??

Conclusions:

DETECTION OF SEASONAL WEIGHT LOSS AND A SEROLOGIC SURVEY OF POTENTIAL PATHOGENS IN WILD PALLAS' CATS (FELIS [OTOCOLOBUS] MANUL) OF THE DAURIAN STEPPE, RUSSIA

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Thank you for your attention!