Blood was collected only from birds weighing more than 9 g to have a sufficient amount of serum to be tested. Serum samples were stored at +4°C until taken to the laboratory where they were screened for WNV-neutralizing antibodies by virus neutralization test (VNT) according to standard methods. A 90% neutralization was used as the criterion for a positive test result.

Results: Of the 599 blood samples, 13 were from birds bled twice and 17 were of an insufficient volume to be analysed. Only one bird, an Italian sparrow, adult, resulted seropositive (0,17%, 95% confidence interval 0,04% to 0,9%) with a VNT-titre of 1:10. A total of 6 Italian sparrows were sampled so that the prevalence among this species of birds was 16,7%, 95% confidence interval 3,7% to 57,9%.

Conclusion: Although the seropositivity is not evidence of recent infection, we presume that the seropositive bird was infected locally because the species involved is not migratory.

The evidence of local WNV transmission in Central Italy indicates risk for West Nile fever and meningoencephalitis in the human, equine, and avian populations of Italy, as already hypothesized in 1998 after the WNV outbreak caused by a Senegalese strain probably introduced by migratory birds.

We therefore suggest that WNV be considered in the differential diagnosis of humans and other vertebrates with neurological signs of disease in Italy, also to avoid underestimation of the real prevalence of the disease.

11.009 Pet Amphibian Keeping in Central Europe: Underestimated Contagious Hobby

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Background: Amphibians are increasingly popular pet animals in European households despite their mostly unknown capacity to transmit diseases associated with animal keeping. This study was dedicated to clarify the current epidemiological condition of pet amphibian keeping in Austria.

Methods: Since 1995 pet amphibians from Austrian keepers, mostly frogs and newts, were dissected when deceased; tissue samples, more than 300 fecal samples, and biofilms from the terrarium facilities were tested for identification and characterization of parasites, bacteria and fungi potentially co-infecting man and amphibians.

Results: Such pathogens identified belonged to the taxa Cryptosporidia, free-living, potentially pathogenic ameba (Acanthameba), Salmonella enterica, Weeksella virosa, and Mycobacterium fortuitum.

Conclusion: The microbial fauna of the interface man – pet amphibium – feeder animal – biofilm is characterized by the above-average frequent appearance of a small number of opportunistic pathogens. This obvious bias of the microorganism spectrum may be caused by the special conditions of pet keeping, particularly with regard to unnatural old age, pathogen selection due to host spectrum narrowing, and immunodeficiency due to permanent stress. From the hygienic point of view pet amphibians must be considered as wild animals but not as domestic ones; a common, adapted microbial fauna has not arisen up to now.

11.010 Influenza A Virus Subtype H5N1 Infection in a Cluster of Domestic Cats in an Animal Shelter in Austria

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Background: Domestic and wild cats are reported to develop severe clinical signs and may die due to natural or experimental infection by highly pathogenic H5N1-Influenzavirus. In Styria (Austria) 194 cats were housed in an animal shelter, close to a poultry area where a swan had died from H5N1-Influenzavirus (IvA-H5N1) infection. Influenzavirus A specific nucleic acids were detected in pharyngeal swabs of 3/40 randomly sampled cats 8 days thereafter. All cats were quarantined and monitored for clinical symptoms, virus shedding and antibody production for 6 weeks.

Methods: Pharyngeal and rectal swabs sampled during the quarantine period were examined for the matrix-gene of IvA by Real Time RT-PCR as well as for feline Herpesvirus and Calicivirus specific nucleic acids. Plasma samples were tested for Feline Leukemiavirus (FeLV) antigen (ELISA) and for antibodies against IvA-H5N1, Feline Immundeficiencyvirus (FIV, immunomigration test) and Feline Coronavirus (FCoV, indirect immunofluorescence assay)

Results: IvA specific nucleic acids could not be detected in any sample taken at the quarantine station. Antibodies against IvA-H5N1 were detected in two cats reaching titers of 1:256. None of the cats that had been originally tested positive for IvA or had seroconverted against IvA developed clinical symptoms.

Virological examinations revealed infection with FeLV in 15 cats, FIV in 12 cats, and an antibody titer against FCoV in all but one cat. 57 swabs gave positive results for FCV specific nucleic acids, 17 for FHV-1.

Conclusion: The introduction of IvA-H5N1 infection in a large group of cats, originally demonstrated by detection of viral nucleic acids in pharyngeal swabs, could be confirmed by seroconversion. However, there was no evidence for Influenza associated disease. The absence of morbidity is remarkable as it has to be assumed that several cats of the population had developed an immunocompromised status due to other infectious diseases. Since seroconversion was confirmed in only two cats, horizontal transmission within the cat population is very unlikely.

11.011 West Nile Virus Infection in Horses in Croatia

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The aim of surveing the horse population for the presence of WNV antibodies was attempt to provide information to veterinary epidemiologists. Animals were randomly selected from 8 Croatian regions and total of 980 serum samples were tested. Serum samples were firstly screened by using an home made IgG ELISA and the positive results confirmed using serum-neutralization and complement fixation tests. Of 980 serum samples 4 were found positive for WNV by IgG an home made ELISA. All four were confirmed by SN and only three of them by CFT. To date, there is no evidence that WN virus occured in equine population in Croatia. All positive animals were from a stud-farm located in Dakovo suggesting that the virus activity was concentrated only in that and possibly to restricted geographic area. It's known that migratory birds appear to play an essential role in the introduction of WNV into new regions. From Scandinavian countries to Africa, migrating birds fly in a broad flying zone across Croatia and there are several swampy regions in Croatia where many birds species nest. One of such region is in vicinity of Dakovo, where positive horses were detected. Our findings indicate an active focus of WN virus in horses in Croatia and might suggest a possible role for these animals as sentinels for human risk due to WN virus infection.

11.012 Recreational Drug Abuse and Possible Interference with Anti-orthopoxvirus Immune Response: Implications for Smallpox Vaccination

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Background: Infection with highly immunogenic Orthopoxviruses usually leads to cross protection among species, which has been a prerequisite for successful eradication of smallpox.

Methods: Here we report the rare case of a 17 year old male, who survived a generalised Cowpox virus infection of unusual severity but did not show a proper seroconversion.

Results: Only a very weak immune reaction was observed, which initially appeared to be Cowpox virus specific in immunofluorescence. In Western blotting unusual low antibody titres were observed in early and late serum, restricted to the orthopoxvirus H3L protein only.