



Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE  
FACULTY OF VETERINARY MEDICINE - SKOPJE

# BOOK OF ABSTRACTS

**“Days Of Veterinary Medicine”  
10<sup>th</sup> International Scientific Meeting  
and  
2<sup>nd</sup> European Conference on  
Veterinary and Medical Education 2024**

22-25 September 2024,  
Republic of North Macedonia

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**P41****A COMBINED DIAGNOSTIC APPROACH FOR OTITIS EXTERNA IN DOGS AND CATS: CYTOLOGY, CULTURE AND MICROSCOPIC EXAMINATION FOR PARASITES**

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Otitis externa is a common disease in small animal veterinary practice with a challenging diagnosis due to its complex aetiology. In this study, we used three diagnostic methods to diagnose otitis externa: direct cytology, culture, and microscopic examination for parasites. Samples were taken from ten patients (seven dogs and three cats) showing clinical signs of otitis externa. All dogs belonged to breeds predisposed to otitis externa, including Schnauzer, Shar-Pei, French Bulldog, Maltese, West Highland White Terrier, and English Cocker Spaniel, while the cats were of mixed breed. After a physical examination by the veterinarian and direct cytology with Diff-Quik staining, two swabs (one from each ear) were sent to the Laboratory for clinical microbiology and Laboratory for parasitology, both at the Faculty of Veterinary Medicine in Skopje. The samples were cultured on blood agar in an aerobic atmosphere at 37°C for 24 hours and on DG-18 agar for 72+ hours in an aerobic atmosphere at 37°C. The same swabs were examined by direct microscopy for presence of parasites. After incubation, the bacterial and yeast colonies were identified using MALDI-TOF mass spectrometer. The most frequently identified bacterium was *Staphylococcus pseudintermedius*, isolated from 4 dogs (40%) and 1 cat (10%), followed by *Enterococcus faecalis* (10%) and *Enterococcus canintestini* (10%). Of the four dogs with *S.pseudintermedius* infection, mixed infection with *Mallasezia pachydermatis* was found in 3 dogs (75%). Yeast infection with *Mallasezia pachydermatis* was confirmed in 1 cat (10%). *Otodectes cynotis* was identified as the primary cause of otitis externa in two dogs. In one cat, both *Otodectes cynotis* and *Demodex cati* were identified. In these cases, the culture was negative, even though the veterinarian indicated a bacterial infection. Additionally, one dog with chronic infection and positive cytological findings for bacteria/yeast had a negative culture result and no presence of parasites. These findings emphasize the need of using different diagnostic methods, as there is a possibility of misdiagnosis. To correctly diagnose otitis externa in companion animals, direct cytology, culture, and microscopic examination for parasites should be combined to ensure a correct diagnosis.

**Keywords:** companion animals, ear infection, *Staphylococcus pseudintermedius*, *Otodectes cynotis*, *Mallasezia pachydermatis*