

# Malassezia cuniculi in pet rabbit ear

Juan Luis Abad Colom – Final Degree Project

Veterinary Faculty. UAB. June 2018.

## Introduction

A new species of the genus *Malassezia* was discovered in rabbits seven years ago. Now, we want to bring more data to the lagomorph clinical practice trying to determine the role of this yeast in the pet rabbit external ear duct.

## Objectives

1. Identify *Malassezia cuniculi* yeast in external ear meatus samples from pet rabbits (*Oryctolagus cuniculus*).
2. Establish a relationship between the presence/absence of this yeast with clinic, demographic and morphologic variables.

## Methodology

### Studied population

Pet rabbit (*Oryctolagus cuniculus*) were examined in the Exotic Animal Service in the Hospital Clínic Veterinari.

### Detection Method

Samples were obtained from the external ear duct by cotton swab and stained using the Romanowsky stain technique.

### Analyzed parameters

Sex, Age, Breed, Reason for consultation and Pathological etiology were analyzed.

### Statistical Analysis

A chi-square test was performed with each of the analyzed parameters, considering a  $p < 0.05$  as significant.

## Results

Studied rabbits: 50

*Malassezia cuniculi*-positive rabbits: 26 (52%)

- **Bilateral:** 21 (80,76%)
- **Unilateral:** 5 (19,23%)

Statistic analysis showed that none of the parameters analyzed were significant.

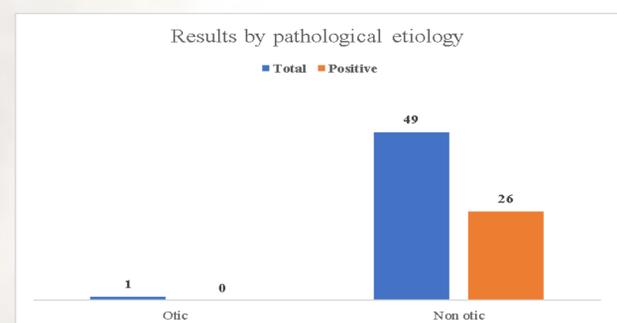
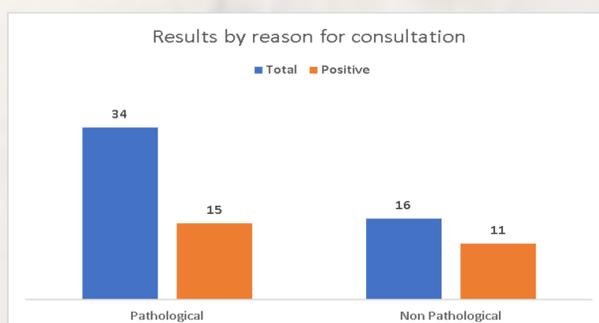
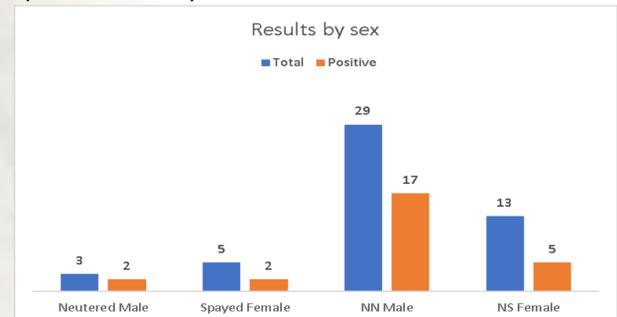
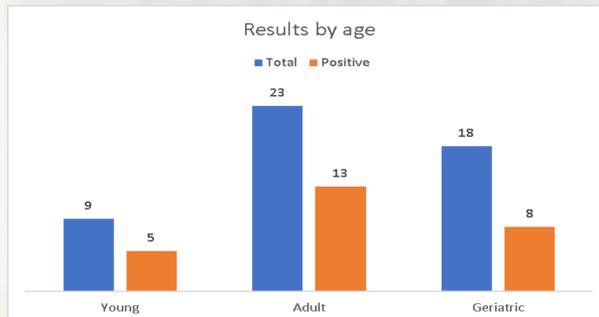
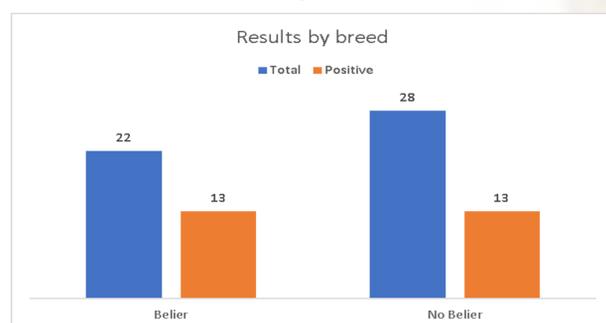
Among the positives, the **most common** were:

- **Adults:** 13 (50%)
- **Neutered Males:** 17 (65,38%)

**None of the positive rabbits had an otic disease when the sample was taken.**



**Fig. 1:** Four *Malassezia cuniculi* yeasts observed through an optic microscope after a Romanowsky stain. The morphology of this yeasts has been described as spherical, 2 – 5  $\mu\text{m}$  in diameter (arrow), with buds formed in a monopolar pattern on narrow bases (arrow head). x40.



**Figures 2 to 6:** Study results sorted by age (2), sex (3), breed (4), reason for consultation (5) and pathological etiology (6)

## Discussion

The obtained data shows that *M. cuniculi* is present in animals of all ages, on both sexes (neutered/spayed or not) and equally distributed in both breeds examined. Our results are similar to the ones obtained in *Malassezia spp.* prevalence studies in dogs and cats. However, *M. cuniculi* is not associated with external otitis in rabbits, whereas other *Malassezia* species such as *M. pachydermatis* and *M. furfur* are directly associated with external otitis in dogs and cats.

Although more data and further research will be needed, according to our results, and the results from the study of Quinton *et al.* (2014) on pet rabbits, we can state that *M. cuniculi* follows a situation of physiological comensalism in pet rabbits.

## Conclusions

*M. Cuniculi* can be found in the ear of healthy pet rabbits. The presence of *M. cuniculi* yeasts is not influenced by age, sex, breed or presence/absence of pathology, and *M. cuniculi* may not be considered as a primary agent in otitis externa in rabbits.