

# Czech Academy of Agricultural Sciences



Open Access Agricultural Journals

VETERINÁRNÍ MEDICÍNA  
VETMED

[home](#) [page](#) [about us](#) [contact](#)

[us](#)

Table of  
Contents

**VETMED  
2015**

**VETMED  
2014**

**VETMED  
2013**

**VETMED  
2012**

**VETMED  
2011**

**VETMED  
2010**

**VETMED  
2009**

**VETMED  
2008  
VETMED  
2007  
VETMED  
2006  
VETMED  
2005  
VETMED  
2004  
VETMED  
2003  
VETMED  
2002  
VETMED  
2001  
VETMED  
Home**

---

**Editorial  
Board**

**For Authors**

- **Authors  
Declaration**
- **Instruction  
to Authors**
- **Guide for**

**Authors**

▪ **Fees**

▪ **Submission**

---

**Subscription**

## Veterinarni Medicina

Susceptibility of selected murine and microtine species to infection by a wild strain of *Francisella tularensis* subsp. *holarctica*

Bandouchova H., Sedlackova J., Hubalek M., Pohanka M., Peckova L., Tremf F., Vitula F., Pikula J.:

Veterinarni Medicina, 54 (2009): 64-74

[ [fulltext](#) ]

The purpose of this study was to compare susceptibility of BALB/c mice, common voles (*Microtus arvalis*) and yellow-necked mice (*Apodemus flavicollis*) to infection by a virulent *Francisella tularensis* subsp. *holarctica* strain. Median survival in these three species following experimental infection with 320 colony forming units of *F. tularensis* (both intraperitoneally and subcutaneously) amounted to 4.5, 7 and 4 days, respectively. Survival curves of BALB/c and yellow-necked mice were very similar and were significantly different from that of common voles. LD50 was 0.5 and 37.9 colony forming units in BALB/c mice and common voles, respectively. The bacterial

burden in the spleen, liver, lung, kidney and blood of common voles started to develop later post exposure and amounted to lower levels (except in kidneys) than in BALB/c mice. The results demonstrate that yellow-necked mice are even more susceptible to infection by *F. tularensis* than BALB/c mice and that the common vole is a small mammalian host with a susceptibility which is two-orders-of-magnitude lower.

**Keywords:**

tularaemia; survival time; minimum infectious dose; LD50; bacterial burden

[ [fulltext](#) ]

---

© 2015 [Czech Academy of Agricultural Sciences](#)