

Bats may be carriers of *Campylobacter*

Hazeleger Wilma C.¹, Jacobs-Reitsma Wilma F.², Bergen Marcel van³,
Lina Peter H.C.⁴, Bosch Thijs¹, Beumer Rijkelt R¹

¹Laboratory of Food Microbiology, Wageningen University, Netherlands

²RIKILT Institute of Food Safety, Wageningen, Netherlands

³Animal Sciences Group, CVI-KAZ, Lelystad, Netherlands

⁴Netherlands Centre for Biodiversity 'Naturalis', P.O. Box 835, 2300 AV Leiden, the Netherlands;
E-mail: phclina@telfort.nl, peter.lina@ncbnaturalis.nl

Since the contamination cycles of *Campylobacter* and *Salmonella* are not fully elucidated, it is useful to search for possible reservoirs in the environment. Bats are known to be potential carriers of viral pathogens and they might also be relevant in the contamination cycles of *Campylobacter* and *Salmonella* since they are warm blooded animals and could possibly act as hosts for these pathogens. In Western Europe, all bat species are insectivorous. Since it is known that insects are able to transmit *Campylobacter* and/or *Salmonella* for instance via faeces of farm animals or water birds, they might be a source of infection for bats. By contaminating water, crops, fruit, feed or soil with their faeces, infected bats might be a part of the contamination cycle of both pathogens. In this investigation, we examined wild bats for the presence of *Campylobacter* and *Salmonella* in 2007 and 2008.

Fresh faecal samples (<10mg -100 mg) were collected from live, wild bats with transport swabs (Copan Diagnostics Inc., 109.USE), kept at 0-7°C and examined within two days for *Campylobacter* using Bolton Broth, Preston Broth and CCDA and for *Salmonella* using BPW, MSRV and BGA/XLD.

Campylobacter was found in 17 out of 632 samples, in 6 (of 14) different bat species from diverse habitats. *Salmonella*, however, was never isolated. Since the aim was to determine the presence of both *Campylobacter* and *Salmonella*, splitting-up of the material and improvisations on the methods were necessary which could lead to an underestimation of the number of positive animals. The isolated strains are currently MLST-typed, preliminary results indicating *C. jejuni* strains similar to the types previously found in environmental waters, humans, wild birds, geese faeces and chicken.

Bats should be considered as carriers of *Campylobacter* and, where possible, necessary action should be taken to avoid contact between bats (faeces) and food/feed.

Abstract book 15th International Bat Research Conference, Prague, 23-27 Aug 2010, 72.