

## Giardia-information to customers

Dear Madam/Sir

In the latest Health Monitoring Report, issued December 2022, it is reported that 1 out of 15 samples from Barrier 3 tested positive for Giardia in a fecal sample. The test method used is a duplex real time PCR for Cryptosporidium and Giardia. The test uses 18S as target gene and primer/probes *Giardia-80F* and *Giardia-127R*. Genotyping based on PCR results with *tpi* as target gene has shown the sample to be a *G.duodenalis* assemblage A. Re-testing of the minipig in question as well as pen mates all provided negative test results. Furthermore, to increase test sensitivity repeated re-testing of the minipig in question using feces sampled from several consecutive days also gave negative test results.

There are no clinical findings in the minipigs in Barrier 3 which could be related to the finding, which is in agreement with most other studies on this, and no apparent impact on productivity. As all animals are in a strict barrier facility with comprehensive rules of access in place, a new introduction of this organism is unlikely. Rather, it has just been detected now as testing for Giardia was only recently implemented in the HMR.

In conclusion, the results indicate that a potential presence of Giardia is very limited and with no clinical effects in the minipigs.

The incidence of Giardia will be monitored closely.

Assemblage A is potentially zoonotic. However, the very limited prevalence of this organism, the fact that there is generally a host-adaptation on a sub-assemblage level, and that housing and husbandry standards for animals used for scientific purposes are high, make this a finding of limited human health concern.

As always when handling minipigs and other animals, we recommend proper hygienic measures, e.g., not eating in the room where the animals are housed, washing of hands before eating etc.

For questions to this matter, please contact [veterinarian@minipigs.dk](mailto:veterinarian@minipigs.dk)

Sincerely,

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Principle Laboratory Animal Veterinarian  
Ellegaard Göttingen Minipigs A/S

### References

- Cai et al, 2021: Zoonotic giardiasis: an update
- Petersen et al, 2015: Cryptosporidium and Giardia in Danish organic pig farms: seasonal and age-related variation in prevalence, infection intensity and species/genotypes