CoVetLab: working together to strengthen European collaboration on Mycoplasma bovis and compare available diagnostic tools

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**BACKGROUND**

Different clinical presentations of disease caused by *Mycoplasma bovis* predominate in European countries with significant economic and welfare impacts. *M. bovis* disease control relies on good husbandry and an early and reliable diagnosis. However, a lack of standardisation of approaches and diagnostic methods applied makes comparison of disease prevalence between countries difficult.

**AIMS**

- With assistance from CoVetLab.org a consortium of six European national veterinary institutes was established to develop a network of scientists and share tools and expertise on *Mycoplasma bovis*.
- Objectives included hosting workshops and developing ring trials, including collating panels of DNA and serum samples, to evaluate available serological and PCR-based diagnostic tests.

**WORKSHOPS**

A. At Ruokavirasto in Kuopio to develop PCR and ELISA ring trials.
B. Joint CoVetLab - Nordic Workshop on *M. bovis* in March 2018 at DTU, Lyngby was attended by 45 participants from the veterinary and scientific community from 10 countries.

**M. bovis** PCR RING TRIAL

- Analytical specificity, sensitivity and comparability of seven different PCR methods used to detect *M. bovis* were assessed.
- All methods were in use by at least one of the participants.
- Five different DNA extraction methods, seven PCRs targeting four different genes and six different real-time PCR platforms.
- One commercial kit, all other PCR assays were in-house tests.

![](image)

**CONCLUSIONS**

- This CoVetLab project has enabled scientists from veterinary institutes in Europe undertaking *M. bovis* diagnostics to collaborate on mutually agreed priorities.
- A joint CoVetLab - Nordic Workshop extended opportunities to widen our network of scientists and present preliminary data.
- The comparison of PCR tests has provided reassurance regarding the quality of diagnosis, despite the different target genes and assays used in our laboratories.
- Although only commercial ELISA kits were included, differences in the sensitivity and specificity were obtained.
- Highlights the importance of inter-laboratory studies to assess performance of current and newly available tests.

**REFERENCES:** Wisselink et al. *A European inter-laboratory trial to evaluate the performance of different PCR methods for Mycoplasma bovis diagnostics* accepted BMC Veterinary Research. Andersson et al. (in preparation).

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