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# DNA barcoding of faecal material as a non-invasive approach to active wild bird surveillance for notifiable avian diseases

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## Aim of the study

Assess DNA barcoding as an alternative method for active surveillance

Collection and testing of fresh faeces from wild bird migratory sites for virological testing and DNA barcoding

- Non-invasive sampling is desirable
- Simple – can be integrated into laboratory workflows
- High-throughput
- Relatively inexpensive



## Conclusions

- RNA obtained from faeces for AIV/APMV-1 investigation can be used for DNA barcoding for good quality samples 'fresh faeces'
- DNA extraction method for poorer quality faeces
- Two candidate primer sets cover all species tested so far
- Future utility – outbreak scenarios; importance of environmental sampling

Collect faeces from wild  
bird locations



Test for AIV and APMV-1  
by RealTime PCRs



DNA barcoding on  
virus-positive faeces



Identify avian species  
of origin



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