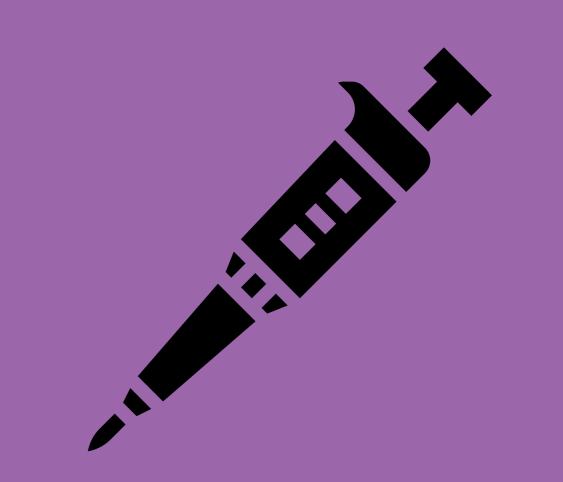


SALIVA AS A DIAGNOSTIC SAMPLE

IN VETERINARY MEDICINE

Ana Silva Bueno FINAL DEGREE PROJECT - JUNE 2022

Faculty of Veterinary Medicine



OBJECTIVES

- Determine the importance of saliva as a diagnostic sample
- Review of saliva applications in different diagnostic areas
- Assess the importance in different animal species and future prospects

PROS & CONS

Lower analyte concentration

Influence of the collection method

Diluted samples = false negatives

Ignorance of how intrinsic and extrinsic factors influence

Food interferences

Non-invasive and painless

Easy to collect method

DIAGNOSTIC AREAS

<u>Electrolytes</u>

Calcium, sodium, phosphorus, magnesium, potasium, chloride

<u>Diagnosis of systemic disease</u>

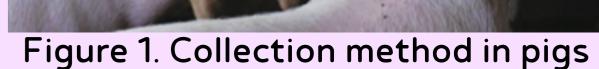
CK, AST, urea, creatinine, glucose, insulin

Biochemistry

Enzymes and hormones

- Biomarkers of stress (Cortisol, IgA, CgA)
- Nonespecific biomarkers of systemic disease (Hp, CRP)

Molecular biology



<u>DNA and RNA detection by</u>

PCR and RT-PCR

Bartonella spp., FeLV, Mycobacterium avium subsp. paratuberculosi (MAP), classical swine fever virus

<u>Diagnosis of oral diseases</u>

Immunology

<u>Diagnosis of infectious and parasitic diseases</u>

Leishmania spp., Taenia hydatigena, FeLV, FIV,
Anophocefala perfoliata, Schmallenger virus, footand-mouth disease virus, PRRSV, Salmonella
typhimurium

Pharmacology

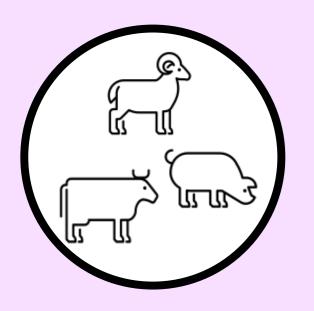
<u>Drug monitoring and detection</u>

Antiepileptic (fenitoin) and antibiotic (neomicin)

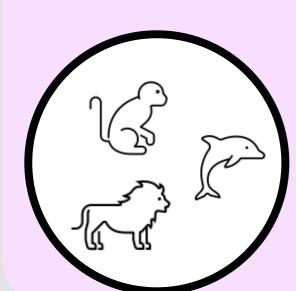
APPLICATIONS



Biomarkers of systemic, infectious disease and drug monitoring



Biomarkers of stress (animal welfare) and health control



Biomarkers of stress (animal welfare), disease surveillance and enzymatic studies

CONCLUSIONS

- Great potential but lack of standardized protocols
- Lots of possible analytes to determine
- Clinical, research and epidemiological applications
- Useful in difficult-to-handle animals
- Current topic in research
- Not currently used routinely, more research is needed

