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Differential cell count of milk samples
A new indicator for intramammary infection

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Ph.D. project

Background

An indicator of mastitis in dairy cows is the somatic cell count (SCC). The majority of these cells are leukocytes (white blood cells) and in response to intramammary infection (IMI), the leukocytes migrate to the mammary glands leading to an increase in the SCC.

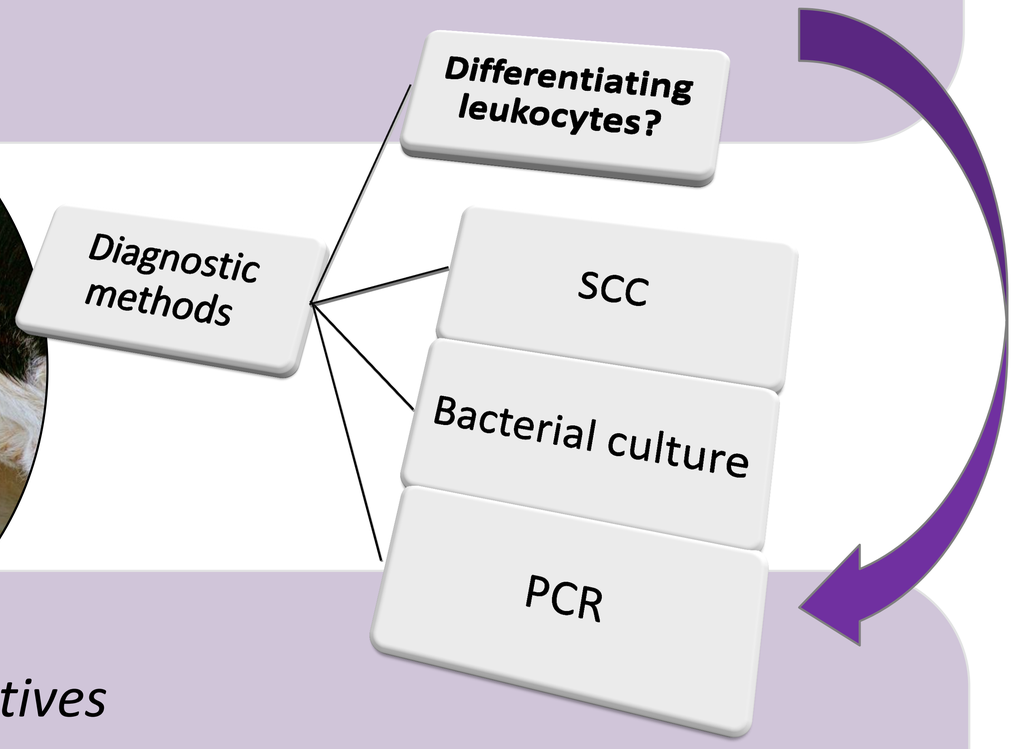
Differentiating the leukocytes in milk samples

Differentiating the leukocytes will enable

- a more specific measure of the inflammatory response
- earlier detection of immune responses to infection
- earlier indication for IMI

Productivity
Animal welfare

Intramammary infection
Antibiotic use



Relevance

Earlier detection gives a lower impact of IMI

- increased milk yield
- increased profitability
- increased animal welfare

Specific detection

- prudent use of antimicrobials
- reduce antimicrobial resistance

Objectives

The objective of this Ph.D. project is to evaluate the diagnostic properties and added value of the differential cell count of leukocytes compared to already existing indicators for mastitis as an new diagnostic tool.

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