

Bacteria on the skin and in milk of ewes



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Introduction

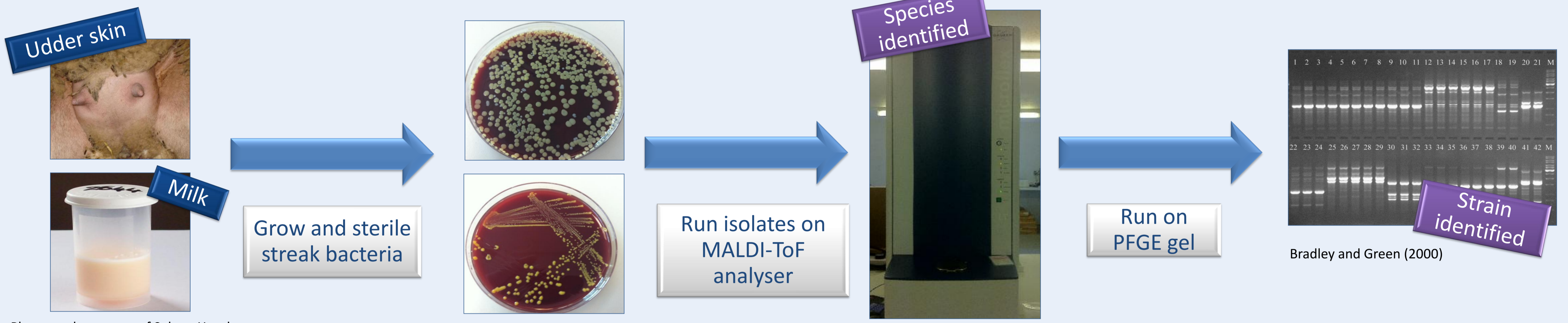
- Mastitis is a disease that occurs when a bacterial infection in the mammary gland causes inflammation
- There are serious economic and welfare implications
- Little is known about when and how the mammary gland becomes infected and whether certain strains of bacteria are responsible for disease

Aim: to identify and compare strains of bacteria on the skin of the udder and from the milk of ewes with and without clinical mastitis



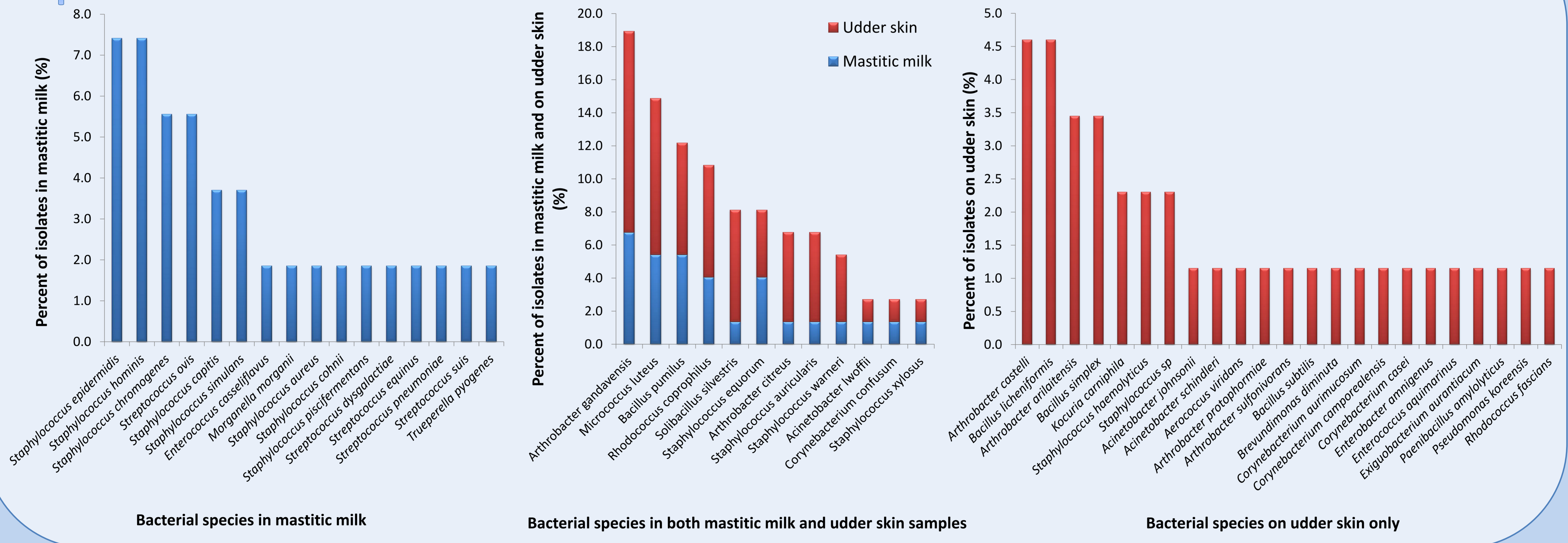
Materials and methods

- Samples were collected from 28 ewes with clinical mastitis, and 3 ewes without clinical signs
- Matrix Assisted Laser Desorption Ionisation Time of Flight Mass Spectrometry (MALDI-ToF-MS) to identify bacterial species
- Pulsed Field Gel Electrophoresis (PFGE) to identify strain types



Photograph courtesy of Selene Huntley

Species identification



Conclusion

- Differences in the bacterial species on udder skin and in mastitic milk
- Certain genera of bacteria, such as *Staphylococcus*, are present in milk and on udder skin
- This suggests that udder skin is a possible reservoir for mastitis causing pathogens

Further work

- PFGE isolates of interest
- Longitudinal studies throughout lactation

1. A Study of the incidence and significance of intramammary enterobacterial infections acquired during the dry period A.J. Bradley, M.J. Green Journal of Dairy Science 1 September 2000 (volume 83 issue 9 Pages 1957-1965)