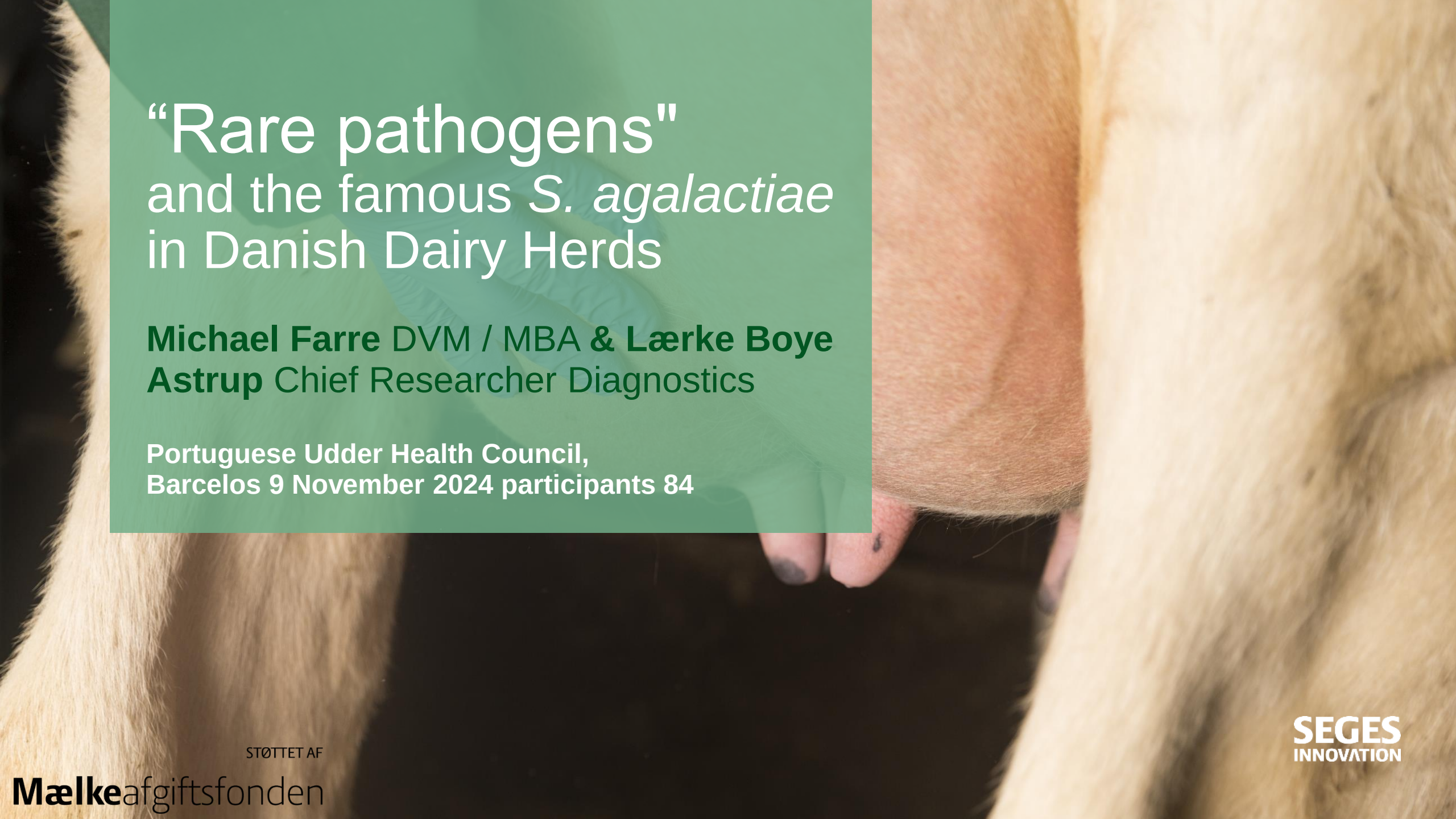

“Rare pathogens"
and the famous *S. agalactiae* in Danish Dairy Herds

Michael Farre DVM / MBA **& Lærke Boye Astrup** Chief Researcher Diagnostics

Portuguese Udder Health Council,
Barcelos 9 November 2024 participants 84

STØTTET AF
Mælkeafgiftsfonden

SEGES INNOVATION

Michael Farre

- Part time Ph.D. fellow 2019-2024
- FAO appointed specialist in milk and milk quality 2022
- Danish Veterinary and Food Administration appointed Specialist in Udder Health and Milk Quality 2019
- MBA Economic & Strategy 2013
- Certificate Dairy Herd Management 2010
- DVM 2005
- Dairy farming background
- Extensive experience with consulting and teaching in Europe, the Middle East and the USA

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The famous *S. agalactiae* - in Danish dairy herds

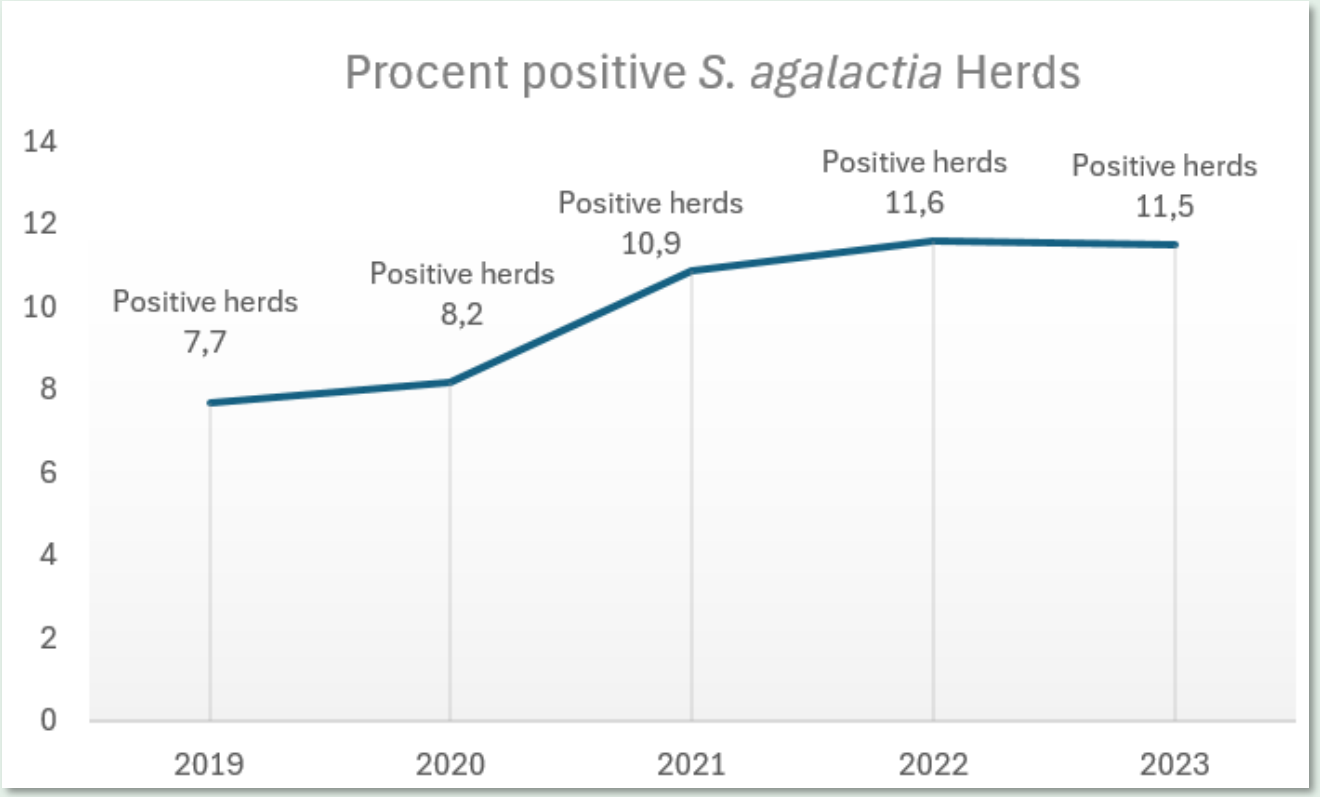
S. agalactiae – at country – herd level

- National surveillance program – two Bulk Milk Tank samples annually
- Testing with DNA Diagnostic® Masti4
- The herds can change status based on the following;
    - A positive quarter sample sent to a laboratory
    - Ct value at the PCR test < Ct 30

SEGES INNOVATION

The famous *S. agalactiae* - in Danish dairy herds

S. agalactiae – at country – herd level



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Therefore, we made some data analysis

S. agalactiae – at country – herd level

- Register data from the Danish Cattle Database
    - We took a 12 months period (June 1st, 2022, and May 31st, 2023)
    - *S. agalactiae* positive if status positive >150 days within the 12 months
- Outcome: *S. agalactiae status* (positive/negative)
- Explanatory variables tested: 23 KPIs from the 12 months

Line Svennesen Assistant professor KU SUND

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Therefore, we made some data analysis

S. agalactiae – at country – herd level

- We identified 216 of 1845 farms with *S. agalactiae* equal to 11,7%
- The most important risk factors identified;
  - Farm size (larger the average), high BTSCC, high milk yield, multisite and conventional dairy farming
  - Higher culling rate (lower DIM and lower number of milking days at culling)
  - No effect of purchase!

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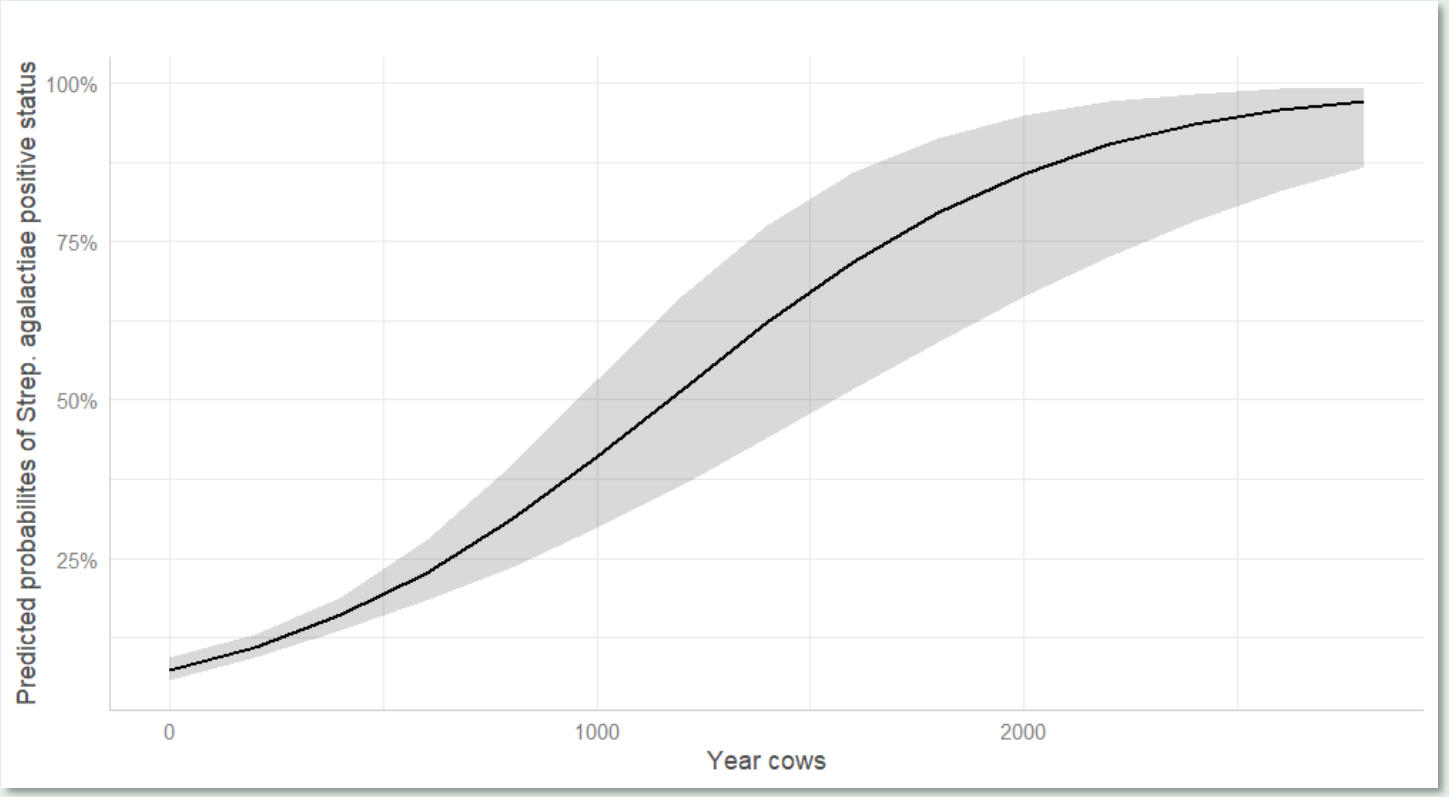
Herd size and probability of infection with *S. agalactiae*

S. agalactiae – at country – herd level



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The human factor of *S. agalactiae*??

S. agalactiae – at country – herd level

- *S. agalactiae* is a zoonosis and in the preventive work we need to consider the human factor
- Danish study enrolling 8 dairy farms – swabs from cows and employees in the herd
- Clones shared by the two host species were in different sub-clusters together with other human strains obtained from persons with no relation to farming
- This suggests a human reservoir of clones capable of colonizing both cattle and humans (Sørensen et al., 2019)

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Why all this talk about *S. agalactiae*?

S. agalactiae – at country – herd level

- The bacteria has not been eradicated in many industrialized countries, which has been the common understanding.
    - *S. agalactiae* is and has been underdiagnosed
    - It will be more prevalent when selective dry cow therapy gets more widespread
    - Do not underestimate the biosecurity needed to decrease contamination from human contact at milking and calving assistance

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Thanks for your attention!

Questions and comments will be highly appreciated!

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ORCID
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