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Short presentation

My main research interests are in the application of quantitative epidemiology to problems affecting animal disease and production, including statistical and mathematical modelling of animal disease systems, appropriate consideration of diagnostic tests for evaluation of disease, and the use of stochastic modelling as a tool to understand the underlying processes of disease systems. These interests are supported by a combination of my veterinary background, statistical knowledge, experience of government advisory work, and programming skills, which have given me a unique insight into problems at the intersection between applied and theoretical aspects of epidemiology and quantitative biology. I also have extensive experience of applying computationally intensive statistical methods to problems within ecology and epidemiology through ongoing collaboration with researchers from veterinary, medical and life science departments at a variety of research and governmental institutions in Denmark, the UK and worldwide. As a researcher working in the veterinary domain I receive funding grants from various relevant government, charity and livestock industry bodies.

Research outputs

Using registry data to identify individual dairy cows with abnormal patterns in routinely recorded somatic cell counts

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Accuracy of three diagnostic tests to detect tooth resorption in unowned unsocialised cats in Denmark

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Quantifying human toxoplasmosis risk from pork consumption in Denmark : A conceptual framework for tissue cyst-based analysis

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A general framework to support cost-efficient fecal egg count methods and study design choices for large-scale STH deworming programs—monitoring of therapeutic drug efficacy as a case study

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Tamarozzi, F., Guevara, Á. G., Anselmi, M., Vicuña, Y., Prandi, R., Marquez, M., Vivero, S., Robinzón Huerlo, F., Racines, M., Mazzi, C., Denwood, Matt & Buonfrate, D., 2023, In: *The Lancet Global Health*. 11, 5, p. e740-e748

Addressing misclassification bias in vaccine effectiveness studies with an application to Covid-19

Eusebi, P., Speybroeck, N., Hartnack, S., Stærk-Østergaard, J., Denwood, Matt & Kostoulas, P., 2023, In: BMC Medical Research Methodology. 23, 55.

Estimating true prevalence through questionnaire data

Mielke, Adam, Denwood, Matt & Christiansen, L. E., 2023, In: Journal of Medical Virology. 95, 7, e28908.

Identifying areas of animal welfare concern in different production stages in Danish pig herds using the Danish Animal Welfare Index (DAWIN)

Michelsen, Anne Marie, Hakansson, Franziska, Lund, Vibe Pedersen, Kirchner, M. K., Dam Otten, Nina, Denwood, Matt, Rousing, T., Houe, Hans & Forkman, Björn, 2023, In: Animal Welfare. 32, e47.

Modeling the Risk of Human Toxoplasmosis in the Danish Population From Ingestion of Tissue Cysts Present in Pork Products

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World Association for the Advancement of Veterinary Parasitology (W.A.A.V.P.) guideline for diagnosing anthelmintic resistance using the faecal egg count reduction test in ruminants, horses and swine

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Determination of an optimal ELISA cut-off for the diagnosis of Toxoplasma gondii infection in pigs using Bayesian latent class modelling of data from multiple diagnostic tests

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