



Animal health knows no boundaries

New insights are not only gained in a quiet room - they also emerge through dialogue. That's why we travelled to international specialist conferences this spring, from England to Bulgaria. We not only shared our knowledge there, but also took many new ideas for our daily work: The challenges in animal health are similar - and they call for practical, scientifically sound solutions.

This is exactly what we are continuously working on: with new ideas, our dedicated team and a clear focus on reliable diagnostics. One current example is our study on *Trueperella abortus* - a pathogen with clinical relevance that has received little attention to date and which we should keep an even closer eye on in the future.

Have a good summer - with some time off and fresh energy for the second half of the year!

Best regards,

Dagmar Köhler-Repp
Dr. Martin Metzner
Dr. Alexander Repp
Jarosław Szubstarski



Our study on *Trueperella abortus*

An underestimated pathogen in sows



Back in 2013, our managing director, Dr. Martin Metzner, and the working group led by Prof. Dr. Christoph Lämmle from the University of Giessen, described the newly emerging pathogen *Trueperella abortus*. Since then, this pathogen has remained relatively inactive, despite causing abortions, fertility issues and vaginal discharge in sows. Dr. Metzner and his team have now picked up the thread again, using the latest data to demonstrate the reality of *T. abortus*. It is real and relevant, yet is still diagnosed far too rarely.

Material and methods

Between the beginning of 2024 and April 2025, **100 vaginal swabs** from clinically conspicuous sows from around **20 farms** throughout Germany were analysed. They were analysed bacteriologically on blood agar plates (with and without selection) and by using MALDI-TOF-MS.

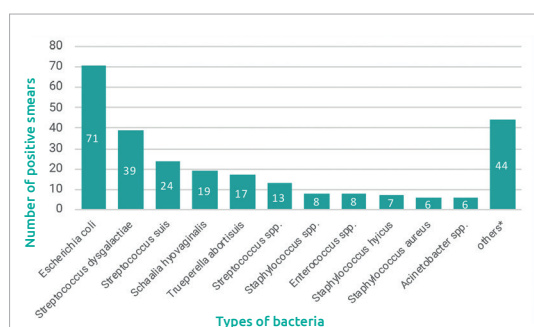
Overview of the results

<i>T. abortus</i> was detected in 17 samples	Mixed infections were common
- Other common germs: <i>Escherichia coli</i> (71) <i>Streptococcus dysgalactiae</i> (39) <i>Streptococcus suis</i> (24) <i>Schaalia hyovaginalis</i> (19)	Resistance to cefquinome and paromycin was found in 9 out of 10 <i>T. abortus</i> isolates - an indication of their potential suitability for the development of a selective culture medium

No longer ignore, but take targeted action

T. abortus grows slowly, is missing in many routine diagnostics and is therefore often overlooked. Our results show the importance of targeted methods - e.g. selective media, MALDI-TOF-MS and PCR - for detection and highlight that infections of the vaginal tract of sows can be caused by multiple bacteria.

This knowledge provides the basis for better hygiene strategies and the use of combined, autogenous vaccines to protect the reproductive health of your herd.



Results of bacteriological examination of 100 vaginal swabs from clinically diseased sows.



Dr. Metzner presented the study in Bern.



E. coli in cattle and pigs

Harmless intestinal inhabitant or pathogen?



Escherichia coli (*E. coli*) is frequently detected in samples from diseased animals - but is also found in healthy ones. Targeted differentiation is therefore important in order to correctly assess its disease-causing role.

What is differentiated?

- *Commensal E. coli*: Naturally occurring in the intestine, mostly harmless
- *Pathogenic E. coli*: Can cause diseases - in the intestine (intestinal) or outside (extraintestinal)

These strains cannot be distinguished purely visually during a bacteriological examination.

Better differentiation with PCR

We already reported on APEC-PCR for poultry samples in our May 2024 newsletter (<https://invac.eu/de/aktuelles/>). Using this molecular biological method, we can analyse and differentiate virulence factors in *E. coli* isolates from cattle and pigs, too.

Targeted treatment and prophylaxis

The advantage for you is that we can identify those *E. coli* isolates that are of particular clinical relevance or carry important virulence factors as early as the diagnostic stage. These strains can either be treated with antibiotics or controlled in the long term with stock-specific immunoprophylaxis - adapted to the current disease situation.

Animal species	Virulence factors
	„Franck-PCR“: Stx1, Stx2, Intimin, F41, K99, STa
	„Bosworth-PCR“: STb, STaP, K99, LTb, F18, 987P, K88, F41, Stx2e

Virulence factors of *Escherichia coli* in cattle and pigs: Stx: shigatoxin, STa and STb: heat-stable enterotoxins, LTb: heat-labile enterotoxin, F: fimbrial types, K: capsule type



The making of

INVAC in front of the camera



Interview with Dagmar Köhler-Repp

Spotlights on, sound on - and action! Our team was in front of the camera for a new image film by the Brandenburg Economic Development Corporation (WFBB), representing the biotech expertise in the state, which was filmed directly at our company - with shots in the laboratory and an interview with our managing director Dagmar Köhler-Repp about our daily work for customised animal health. The film can soon be seen at international trade fairs such as the BIO Convention USA or BIO-Europe - at the joint stand of the state of Brandenburg.



Filming in the lab - Clemens Hirmke (Papagei GmbH) and his team on set, together with Dagmar Köhler-Repp and Dr. Martin Metzner.



First half of 2025

Our conference highlights

Research into poultry, cattle and pigs is closely networked internationally. We were involved in the following events - as sponsors, speakers and participants.

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|  Poultry expert meeting
Hanover |  ESPHM Pig Conference
Switzerland |
|  EMAV association meeting
Berlin |  Alltech cattle veterinarians
Estonia |
|  ASL cattle conference
Burg Warberg |  PVSG Poultry Conference
Bulgaria |
|  MSD Conference
Poland |  VAG Poultry Conference
Austria |
|  EIMERIANA AVIA Conference
Poland |  Alltech/Coppens fish farmers
Lithuania |
|  Turkey Science & Production
England | |



Working together
to improve animal health



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