

during colibacillosis in piglets

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Antibioite Study

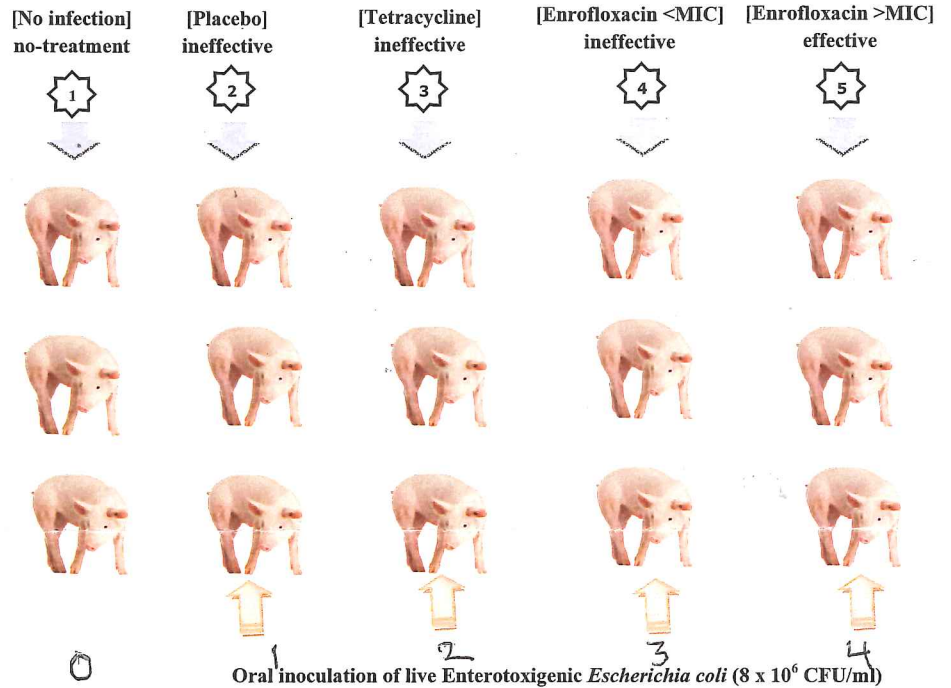
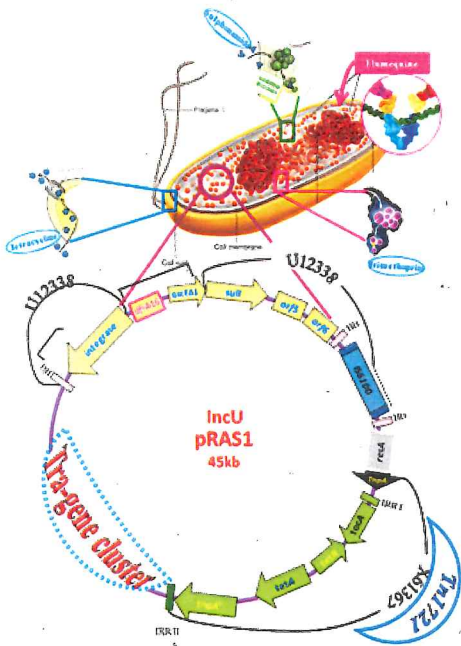
Vector strain and plasmid:

Enterotoxigenic *Escherichia coli* F4 (K88)

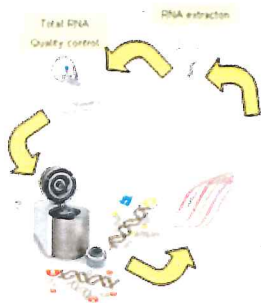


Measurement of Total Immunoglobulin Subsets of Piglets
Total concentrations of the different immunoglobulin subsets (IgG, IgA, and IgM) will be measured by i.e. ELISA.

Total study population:
30 new born piglets (<1-2 weeks)



Evaluation of the bacterial sex genes with qRT-PCR:



Sampling for qRT-PCR

- Approximately 5 g from jejunum digesta

Primers for plasmid encoded genes:

- i) Related to the transfer: *traD*, *virB11* and *virD4*
- ii) Constitutively expressed control gene: *dfi16*

Primers for estimation of total gut microflora (\log_{10} 16S rRNA gene copy number/g fresh matter):

- i) 16S rRNA (universal)

Blood Sampling

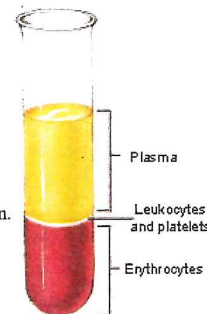
-Aseptically will be collected from all pigs (left jugular vein) at 6, 12, 24, 36, and 48 hours.

-Tubes (Vacutainer, Becton-Dickinson Le pont de Claix, France) containing EDTA for hematological analysis, and sodium heparin for biochemical and immunological analysis, respectively. Plasma samples will be obtained after centrifugation of heparinized blood at $600 \times g$, will be stored at $-20^{\circ}C$ until analyzed.

-Blood samples will be collected from

Hematology

- White blood cell count,
- Red blood cell count,
- Platelet count,
- Mean corpuscular volume,
- Hematocrit,
- Hemoglobin,
- Mean corpuscular hemoglobin,
- Mean corpuscular hemoglobin concentration.



Plasma Biochemistry

- Concentrations of:
- Sodium,
 - Potassium,
 - Chloride,
 - Carbon dioxide,
 - Total proteins,
 - Calcium,
 - Phosphorus,
 - Urea,
 - Creatinine,
 - Bilirubin,
 - Glucose,

Determination of IL-4 and Interferon- γ Production

-CytoSet ELISA kit (Biosource International, Camarillo, CA)

Pathology Sampling

- Aseptically small intestines will be collected and fixed for Hematoxylin-eosin staining.

Normal



ETEC



[Enrofloxacin >MIC

Supplementary Therapy: Antibiotic, Probiotic and NSAID

[Placebo + Metacam]
ineffective

[Enrofloxacin >MIC + Metacam]
effective

[Placebo + Probiotica]

[Enrofloxacin >MIC + Probiotica]

+ Probiotica

+ Metacam

6

7

8

9

10



5

6

7

8

9

10

Oral inoculation of live Enterotoxigenic *Escherichia coli* (8×10^6 CFU/ml)

Metacam
+ probiotica