**Description of the experiment methodology**

The experiment began on 01/04/2024 with **421 chicks** : Two pools, each containing 3 chicks, were sacrificed to obtain a combined muscle mass of 8-10g, which would then be analyzed for antibiotic residues on day 1

**315** chicks divided into 9 separate groups, each containing 35 chicks.

1. The negative control : non infected and untreated : wich is placed isolated and separated from the other groups
2. The group of chicks treated with antibiotics : colistin and amoxicillin
3. The positive control group : infected and untreated
4. The group of chicks fed with feed supplemented with 5g/kg thyme.
5. The group of chicks fed with feed supplemented with 5g/kg rosemary."
6. The group of chicks treated with 0.3ml/L thyme.
7. The group of chicks treated with 0.3ml/L rosemary.
8. The group of chicks fed with feed supplemented with 5g/kg thyme and treated with 0.3ml/L thyme.
9. The group of chicks fed with feed supplemented with 5g/kg rosemary and treated with 0.3ml/L rosemary."

At the time of chicks arrival **(day1)** **, a weight** measurement was taken for each chick, and a **cloacal swab sample** was collected using a sterile swab moistened at the opening of the chicken cloaca. Each chick was then marked with a numbered tag assigned a unique number.

The cloacal swab sampling was conducted to determine the presence or absence of carriage of Multi-Drug Resistant Bacteria (BMR) by the chicks.

On the 3rd day, **200µl of the 10^2 CFU** suspension **of E. coli R56** are inoculated individually to all chicks orally using a polyethylene tube attached to a syringe

After 48 hours **(day5)** of incubation, an individual cloacal swab sample was taken along with a weight measurement

daily follow-up was conducted on days **17, 25, and 34**, with each session including a weight measurement and a cloacal swab sample.

Each cloacal sample was isolated on two MacConkey agar plates : one plate without antibiotics, and one plate supplemented with **2ug/ml CTX and 4ug/ml Enrofloxacin**.

Colony counting was performed after incubation for 24 hours at 37°C, followed by scraping of the colonies that grew on MaC+ATB, and preservation of all positive samples.

A representative sample from each group was randomly taken for culture in MRS medium to quantify Lactobacillus