





# Research activities related to the mitigation of enteric methane production in ruminants





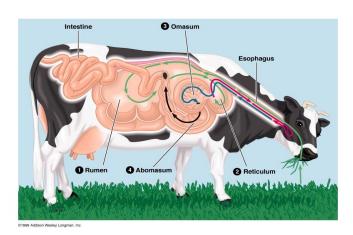


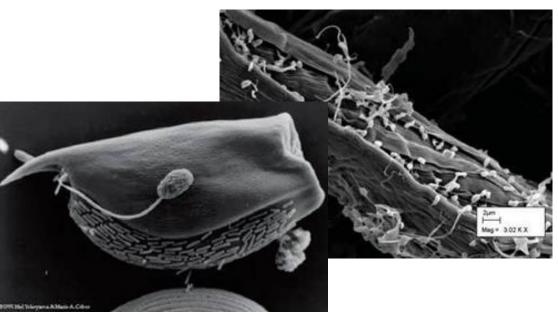
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### **Research infrastructures**

- Chambers for sheep and cattle
- Tents for group measurements
- SF6 technique
- Lasers
- In vitro systems
- Microbial biobank
- Sequencing facilities
- High capacity computer











## BBSRC Institute Strategic Programme Grant "Rumen systems biology"

## **Objectives:**

To understand the rumen as a system so that forage traits can be targeted and used to direct rumen function and metabolism for increasing digestive efficiency, lowering methanogenesis and nitrogen excretion and animal health

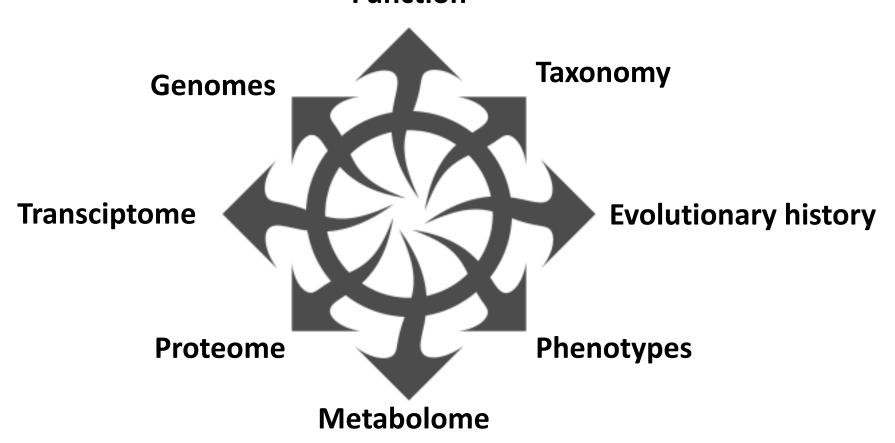






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## Progress through a systems approach Function





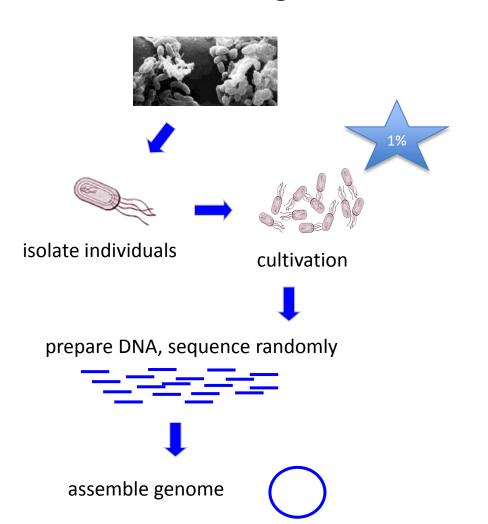




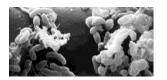
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## **Traditional microbial genomics**



### Metagenomics





prepare DNA, sequence randomly





assemble (partial) genomes

