

Metagenomic analysis as a tool to better characterize the bacterial flora of food and food products

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Metagenomics

Targeted analysis



Who
is in there?

Functional analysis



What
are they doing?

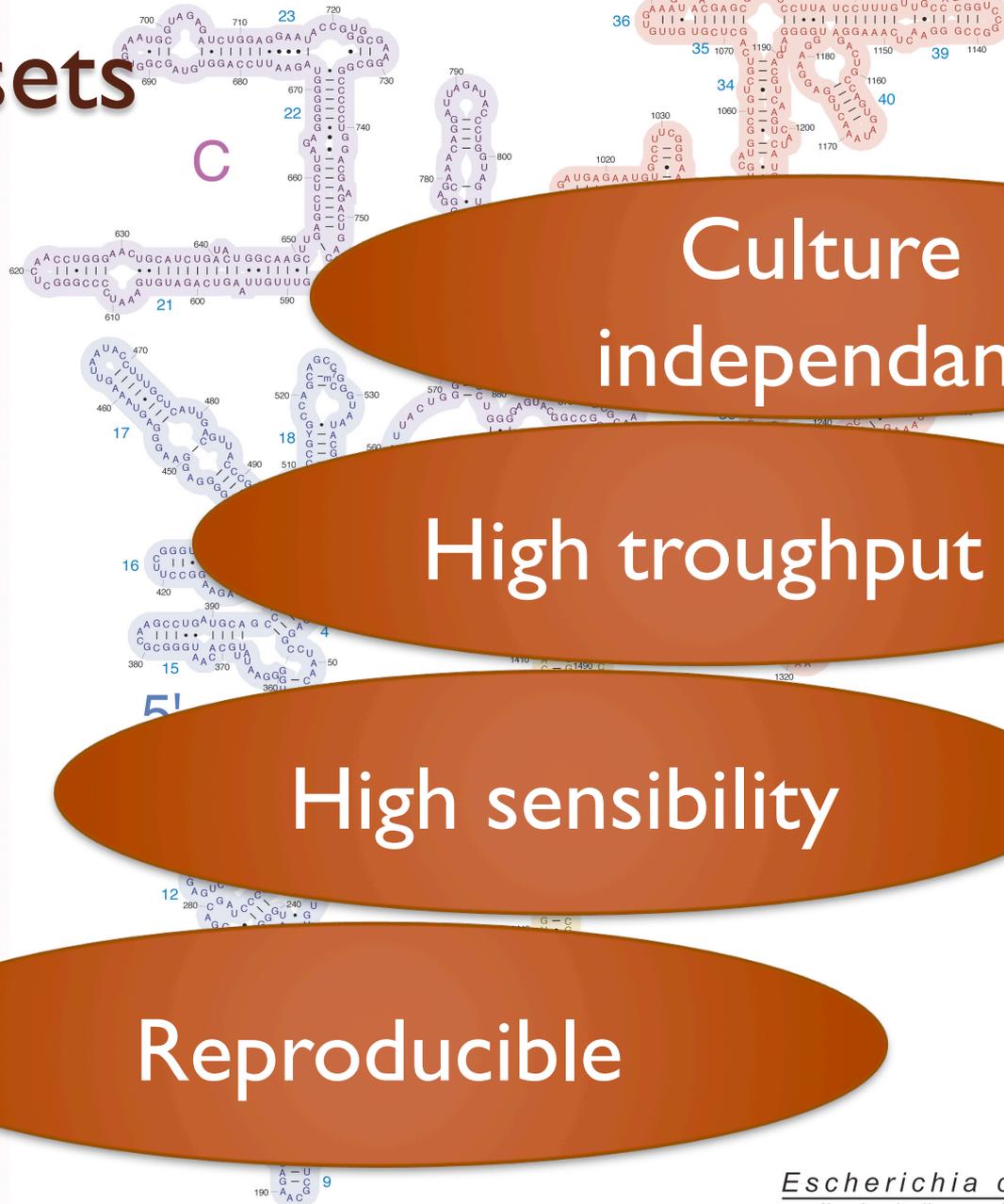
Targeted Metagenomics

High throughput sequencing

Bioinformatics

```
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```

Assets



Culture
independant

High throughput

High sensibility

Reproducible

Durability Assay for two meat based matrices



WP_D0

Workplan



AIR - 4°C

WP_FW_D6

30% CO2 70% N2 - 4°C

WP_MAP30_D21

50% CO2 50% N2 - 4°C

WP_MAP50_D21

MM_D0



AIR - 4°C

MM_FW_S4_D3

AIR - 4-8°C

MM_FW_S4-8_D3

AIR - 12°C

MM_FW_S12_D3

30% CO2 70% O2 - 4°C

MM_MAP_S4_D6

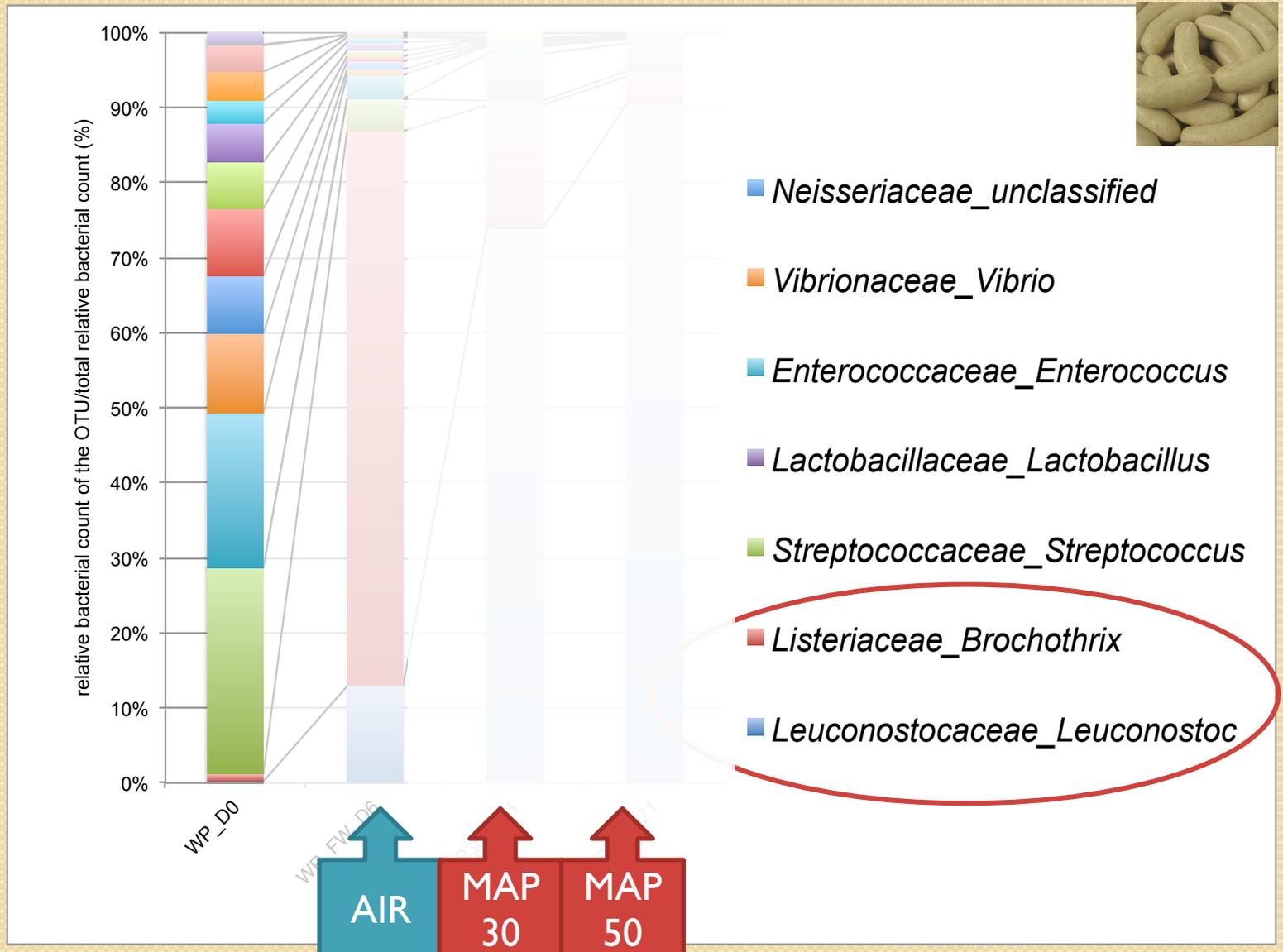
30% CO2 70% O2 - 4-8°C

MM_MAP_S4-8_D6

30% CO2 70% O2 - 12°C

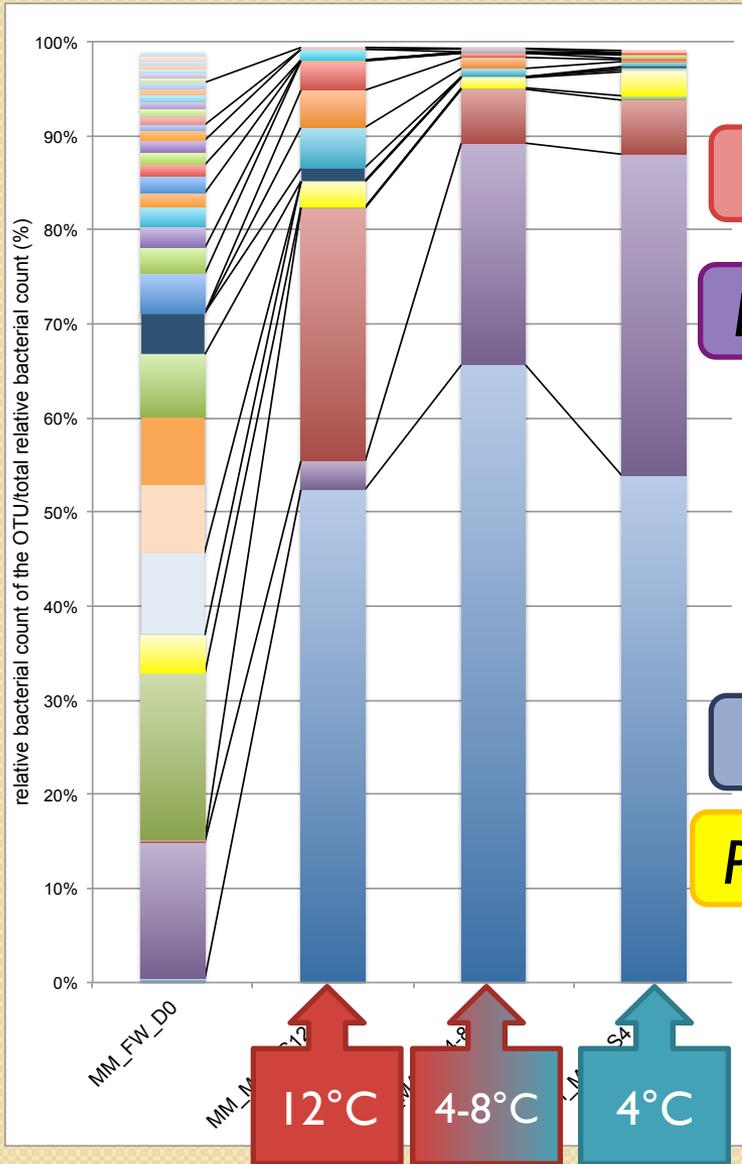
MM_MAP_S12_D6

WHITE PUDDING : POPULATIONS > 1%

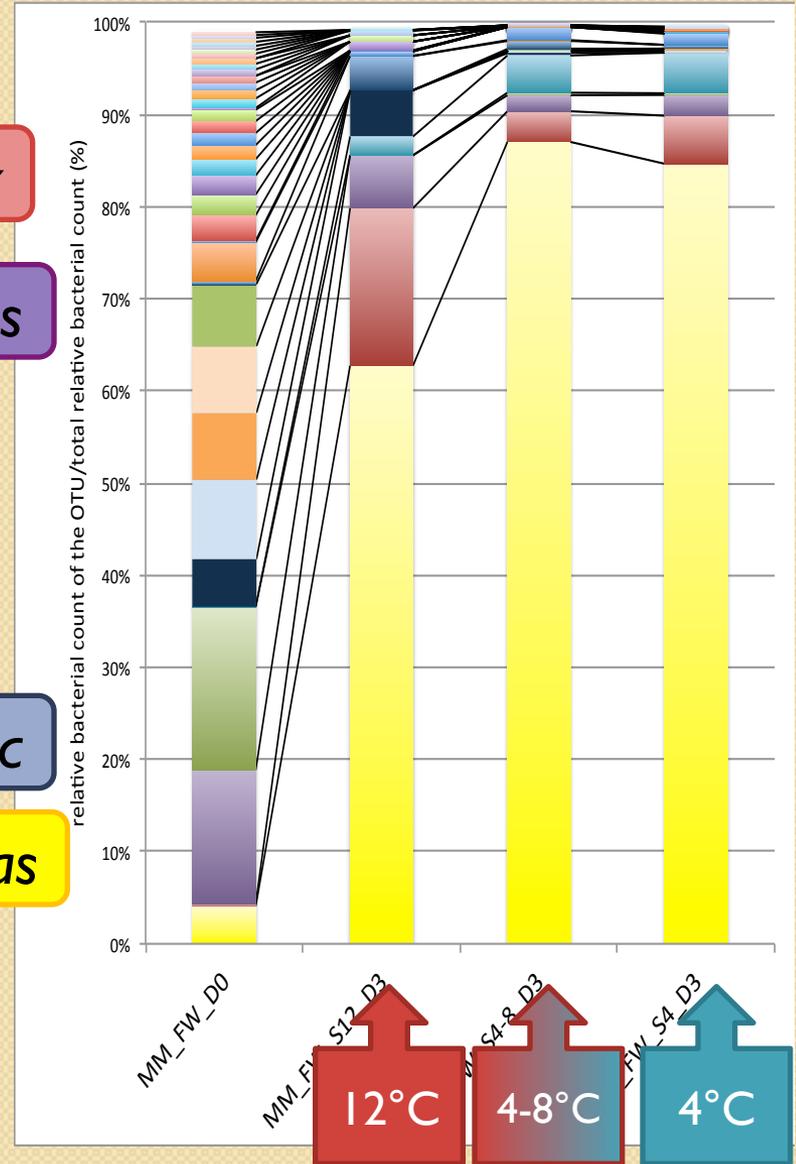


MINCED MEAT : POPULATIONS >1%

MAP

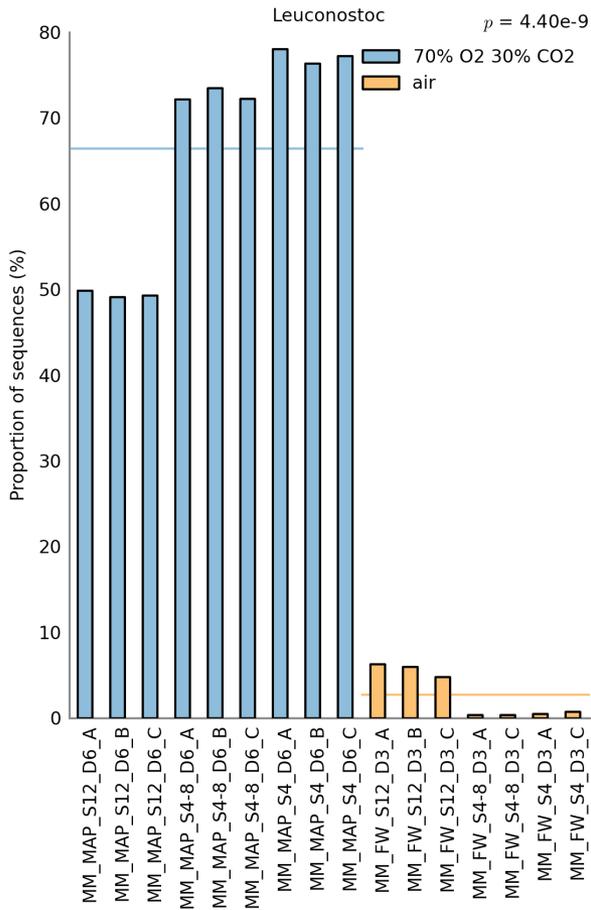


AIR



THE RESULTS ARE REPRODUCIBLE

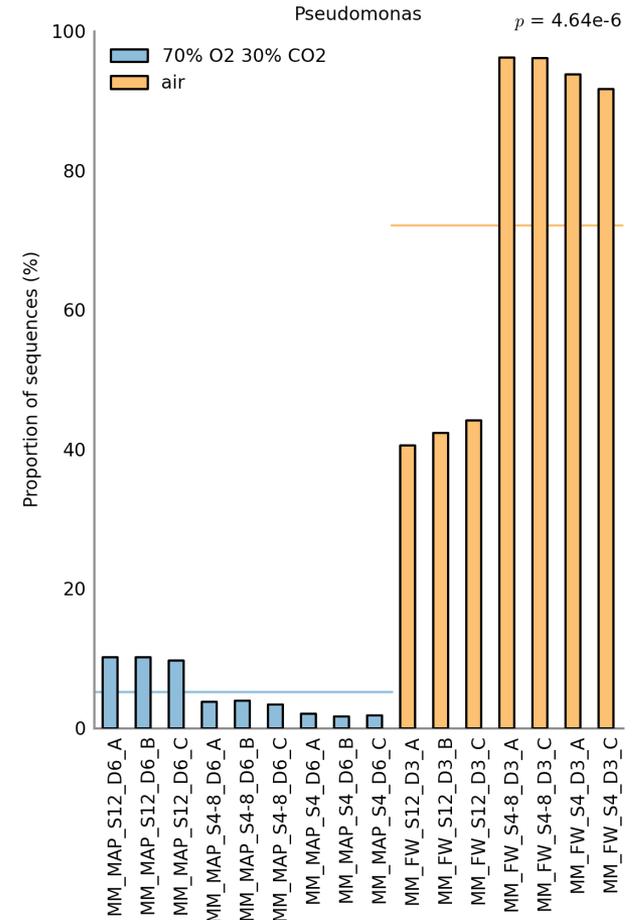
Leuconostoc



MAP

AIR

Pseudomonas



Quality evaluation of vacuum packed beef meat in Belgium



- « Ready to be sliced »
reconditioned in sell units
- Logistic asset for distributors



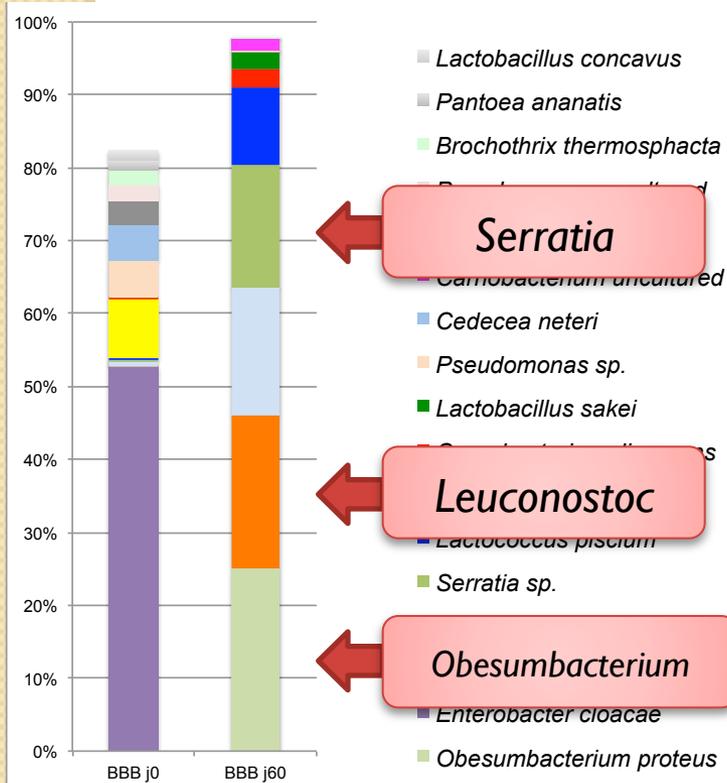
Marked difference between **belgian blue**
meat and **imported meat**

	Belgian Blue	Australian beef meat
Shelf life	60 days	> 120 days

Belgian Blue Meat

Day 0

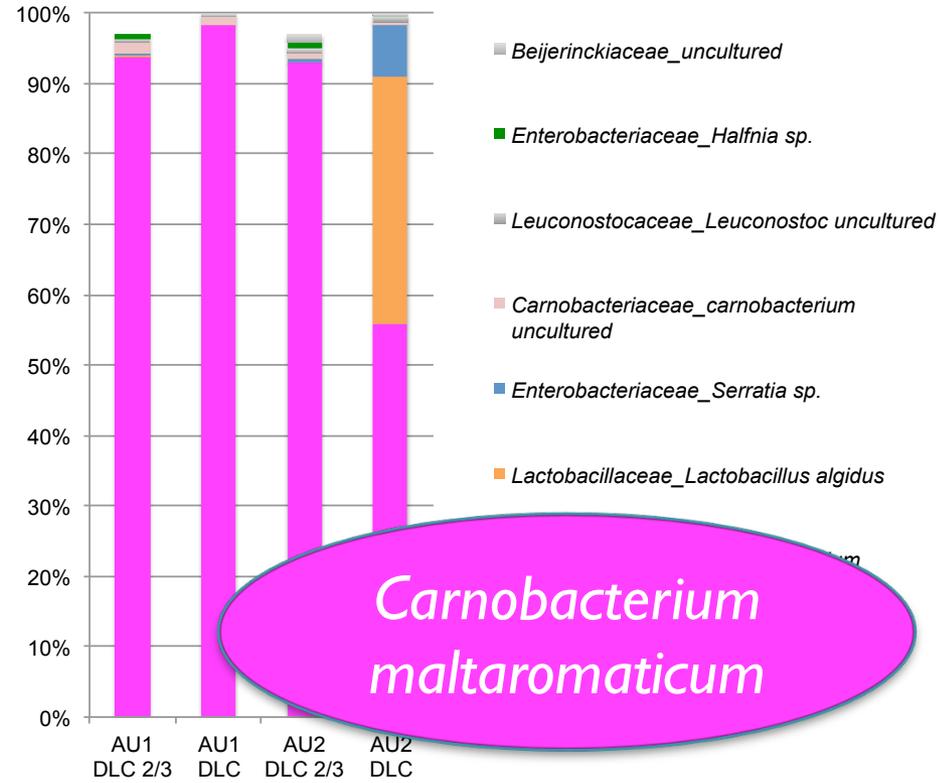
Day 60



australian Meat

Day 80

Day 120



We investigated other matrices...

Which fish isn't fresh ???!



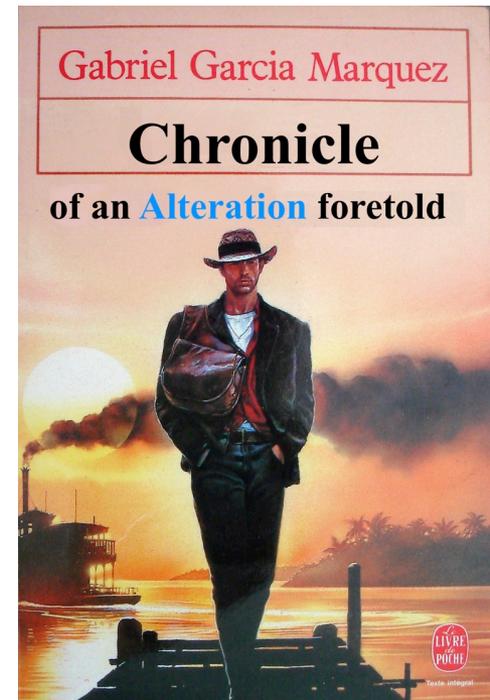
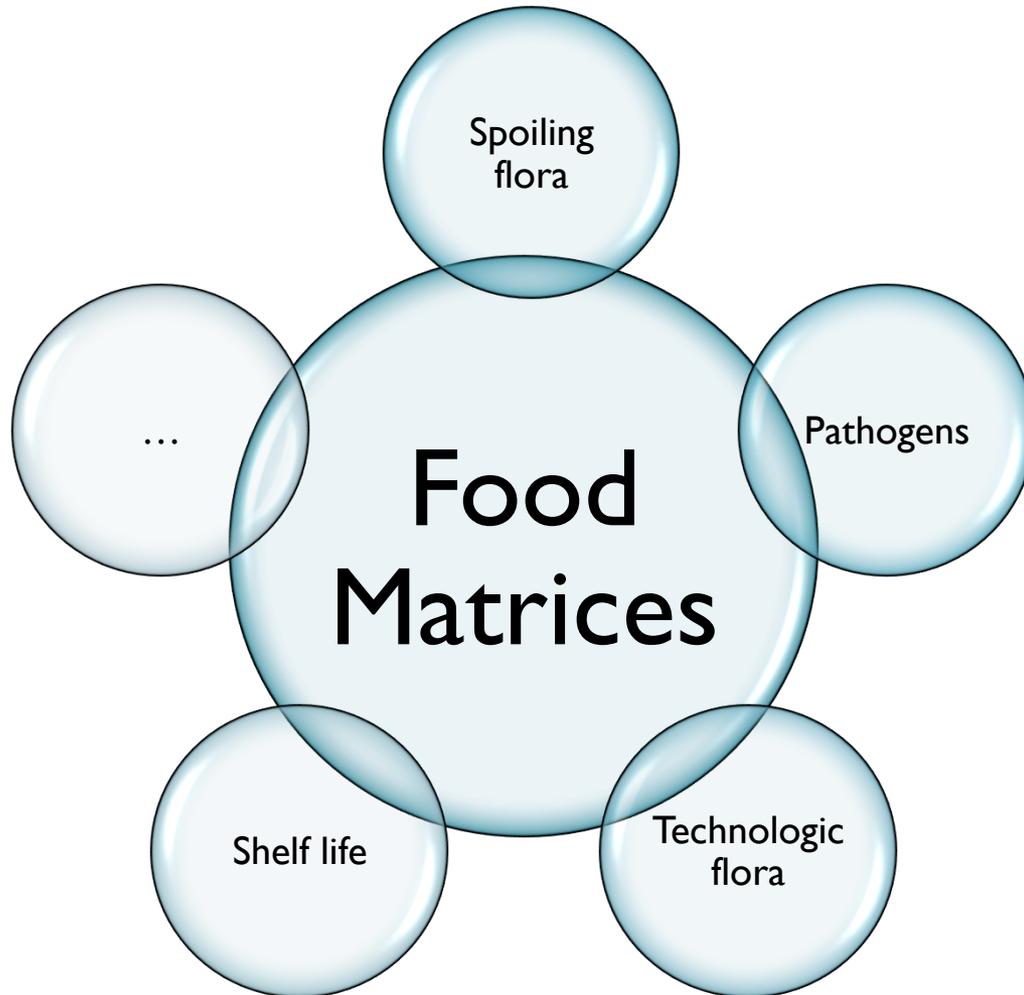
Poster 413

Smell this, my friends !



Poster 412

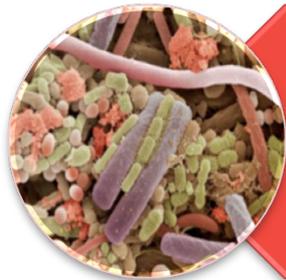
Large prospects





Technical and analytical aspect

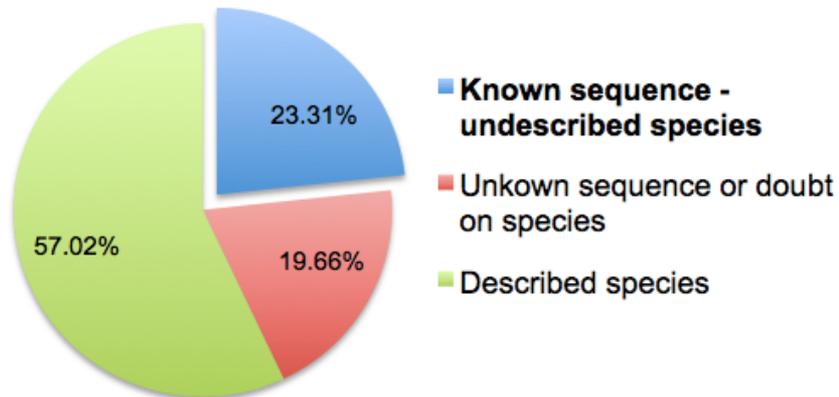
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Microbiological interpretation

+ -

Type of identified taxa (%)



- Lack of knowledge on microbes
- Bright future for characterization of yet unknown bacteria
- Crucial need of specialists of the identified bacterial taxa

DDA

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Denrées alimentaires*



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