

Laboratory for Animal Nutrition and Animal Product Quality

Department of Animal Production

Laboratorium voor Diervoeding en Kwaliteit
van Dierlijke Producten

Vakgroep Dierlijke Productie

Ruminant nutrition & microbial digestion – main research topics

- Central theme : insight in rumen processes to optimise ruminant nutrition and product quality
 - Rumen and pre-rumen processes to increase functional fatty acids (human & animal health)
 - Feeding strategies to optimise rumen fermentation & minimise rumen methane losses
 - Milk based tests to optimise dairy cattle nutrition

Ruminant nutrition & microbial digestion – collaborators

- Supervisor: Veerle Fievez
- Post-doc: 3
- PhD students: 5
- Sandwich PhD students: 2
- Co-supervisor PhD: 2
- Technicians: 2

Functional fatty acids

FEED

Clover – PPO activity

'Natural protection' of
fatty acid sources

Secondary plant
metabolites

RUMEN

In vitro screening of
additives & protec-
tion technologies:
lipolysis – biohydro-
genation

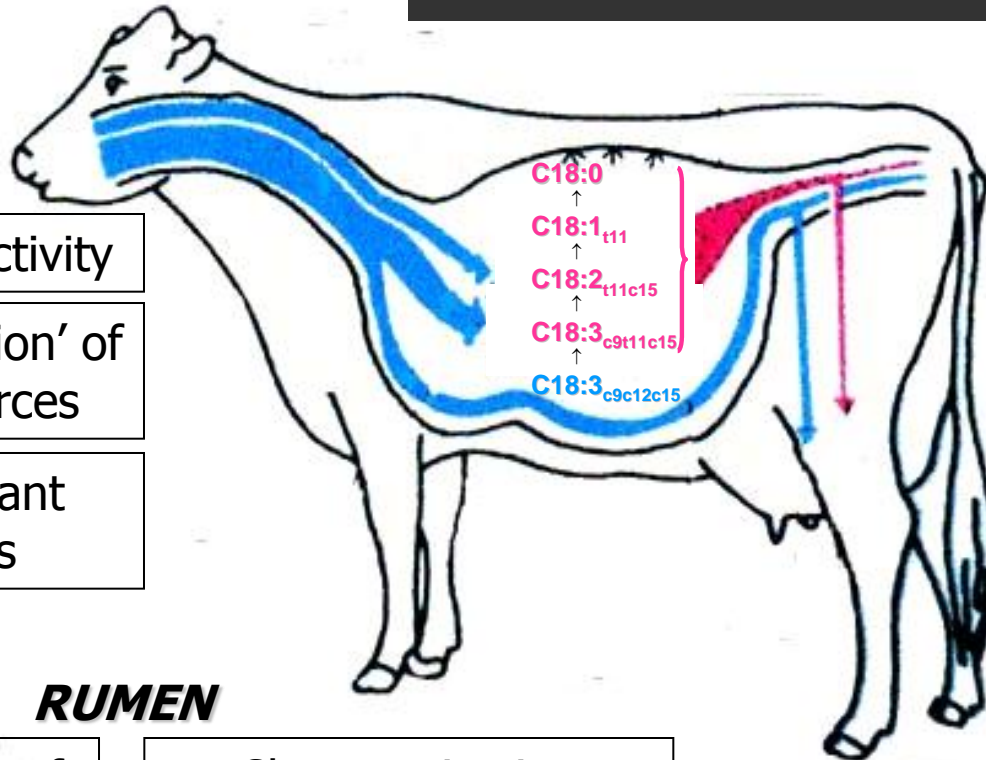
Characterisation
hydrogenating
microbes

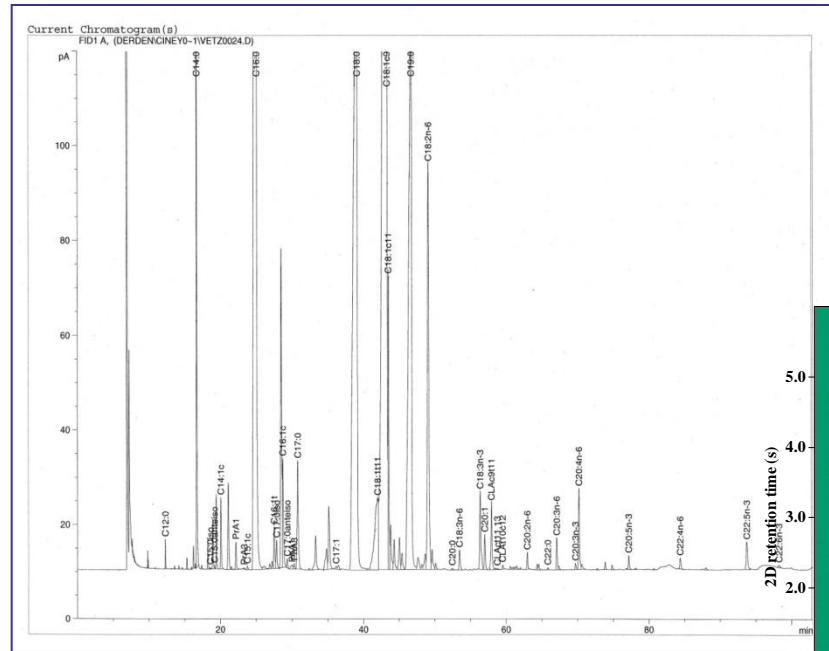
OVARY & UTERUS

Fatty acid
composition follicle
fluid & corpus luteum

MILK & MEAT

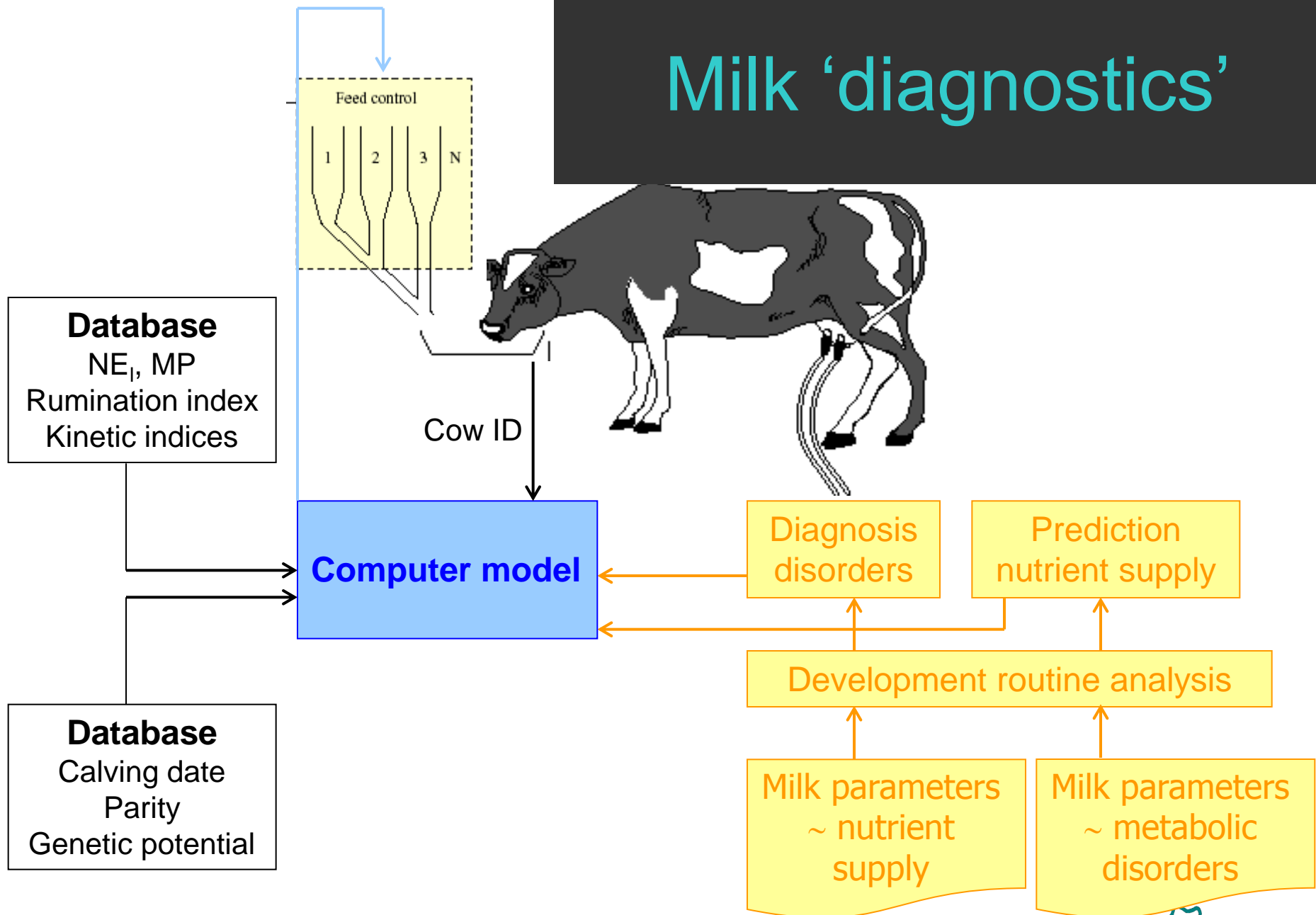
Fatty acid
composition



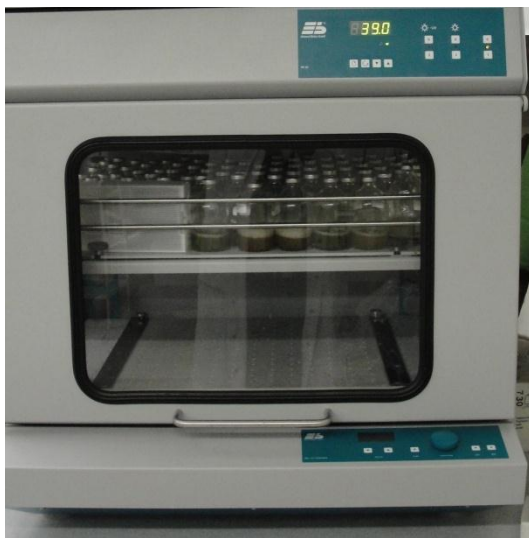


GC x GC – advanced analysis biohydrogenation intermediates

Milk 'diagnostics'



Batch & continuous in vitro & measurements



Analysis of **fermentation metabolites** (CH_4 , H_2 , SCFA, NH_3)

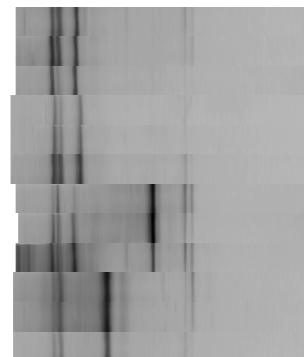
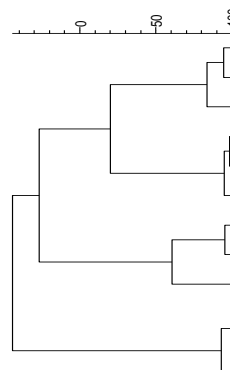
Analysis of **intermediates of fat metabolism** (lipid classes, biohydrogenation intermediates)

Characterisation of **microbial community** (microscopical countings protozoa, molecular characterisation of methanogens, hydrogenating bacteria and others)



Pearson correlation [0.0%-100.0%]
cow1 (1) 04-04-10

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K@Paiwan. 1	15	3	3
K@Paiwan. 1	18	3	3
K@Paiwan. 1	21	3	3
K@Paiwan. 1	15	1	1
K@Paiwan. 1	18	1	1
K@Paiwan. 1	21	1	1
K@Paiwan. 1	18	4	4
K@Paiwan. 1	21	4	4
K@Paiwan. 1	15	4	4
K@Paiwan. 1	18	2	2
K@Paiwan. 1	21	2	2
K@Paiwan. 1	15	2	2