



*a platform for quantitative metagenomic
profiling of complex ecosystems*

Nicolas Pons, Jean-Michel Batto, Sean Kennedy, Mathieu Almeida,
Fouad Boumezbeur, Bouziane Moumen, Pierre Léonard,
Emmanuelle Le Chatelier, S. Dusko Ehrlich and Pierre Renault

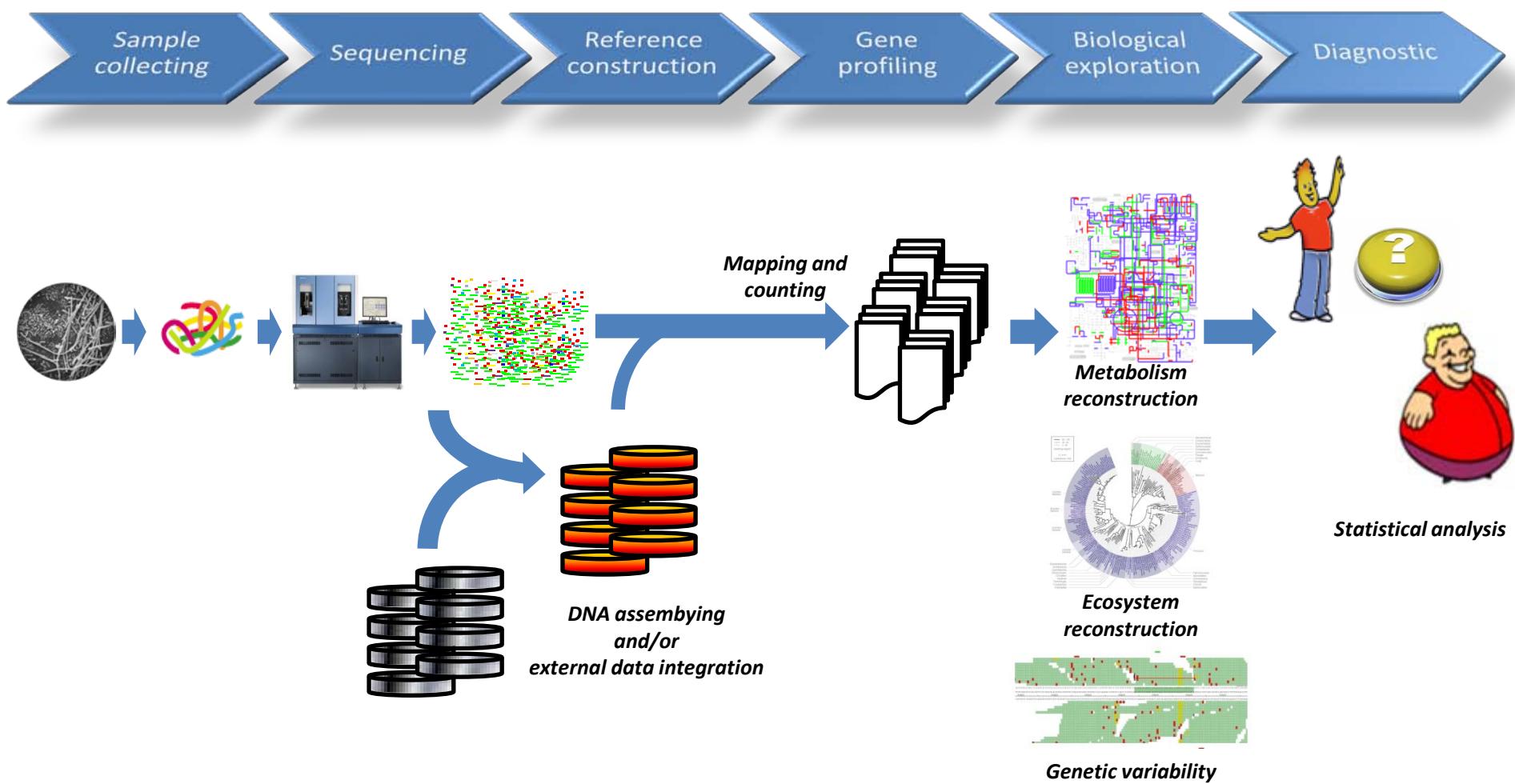


*Micalis - MetaQuant Platform
Jouy-en-Josas*



Poster 19

What is quantitative metagenomic ?





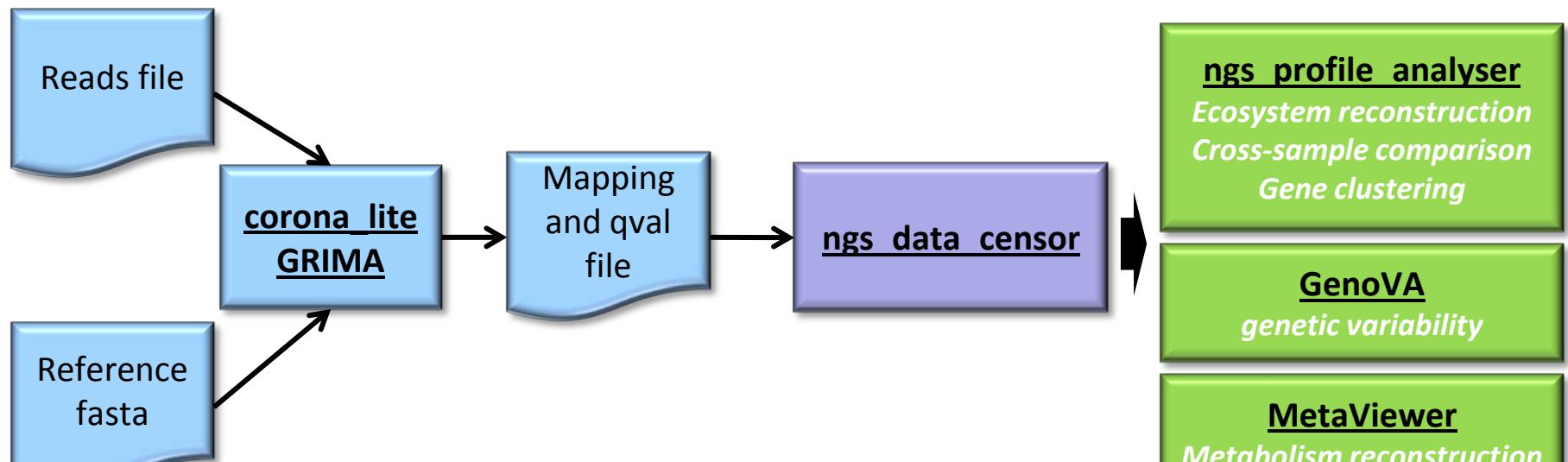
METagenomic ExploratOR

Mapping

Indexing

counting

Analysis



METEOR data sets

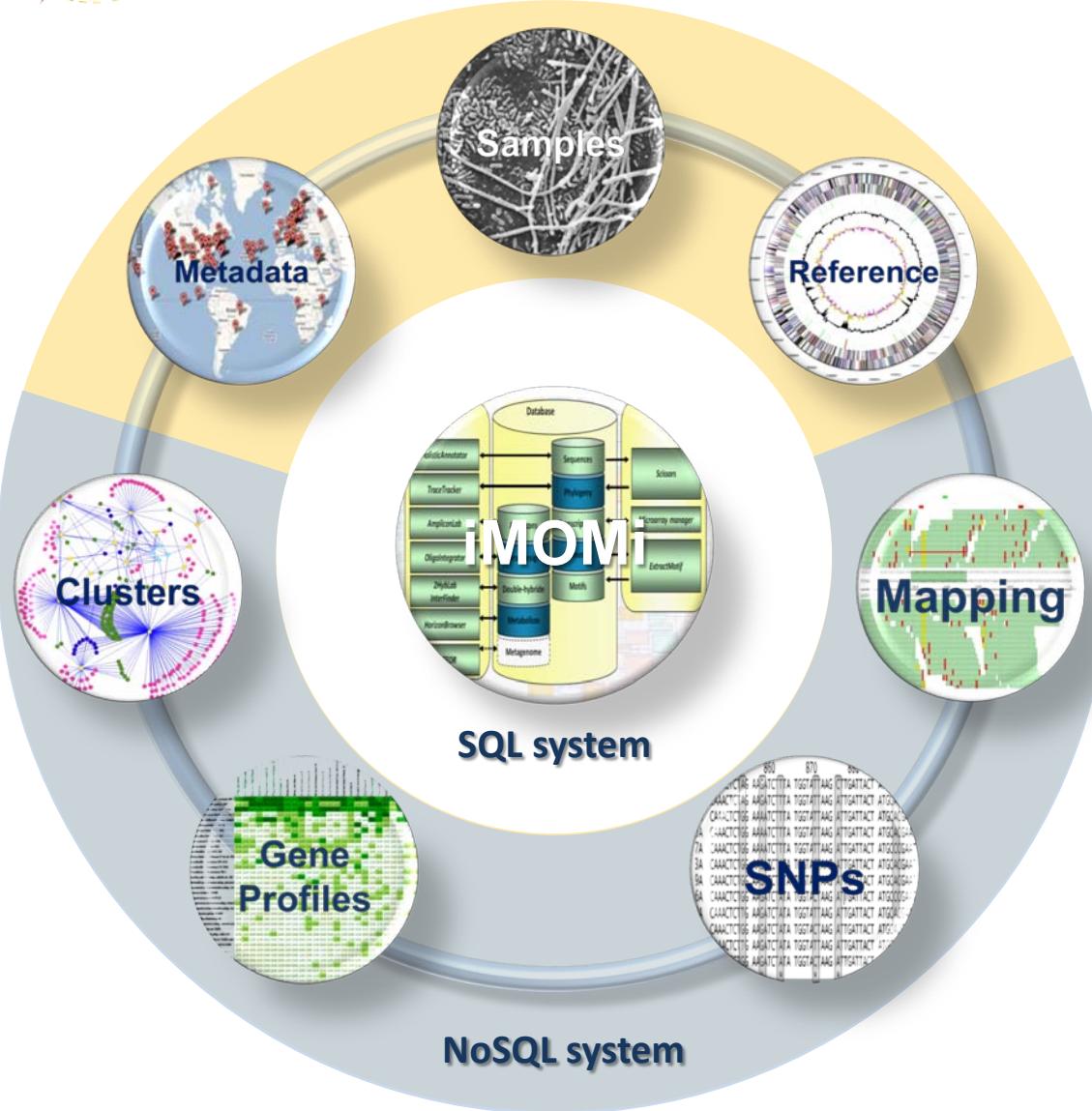
reference manager

sample manager

project manager

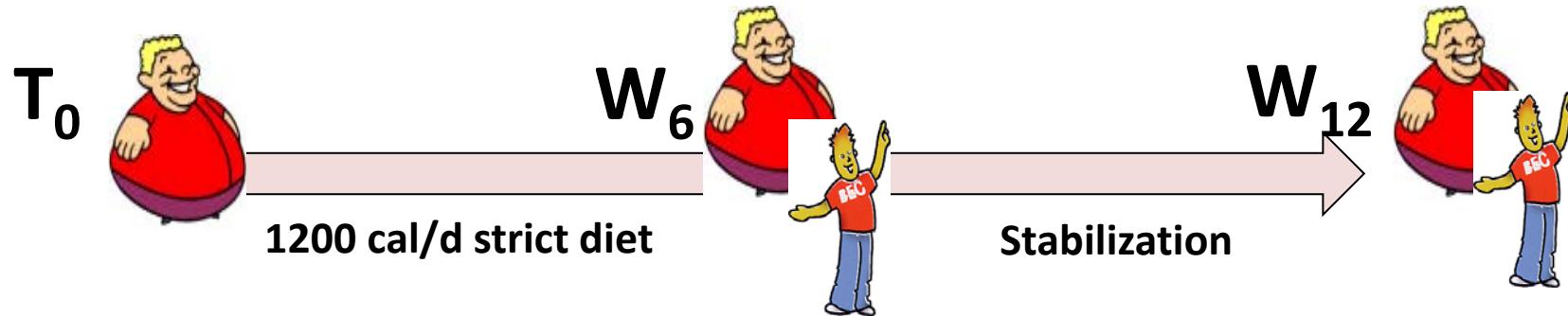


Data management



- Projects :
 - Micro-Obes
 - BB-allergy
 - Food-Microbiomes
 - Metaflora
 - Genome mixes
- ~300 samples
- ~500 Gbases
- >100000 files
- >10 To

Micro-Obes project



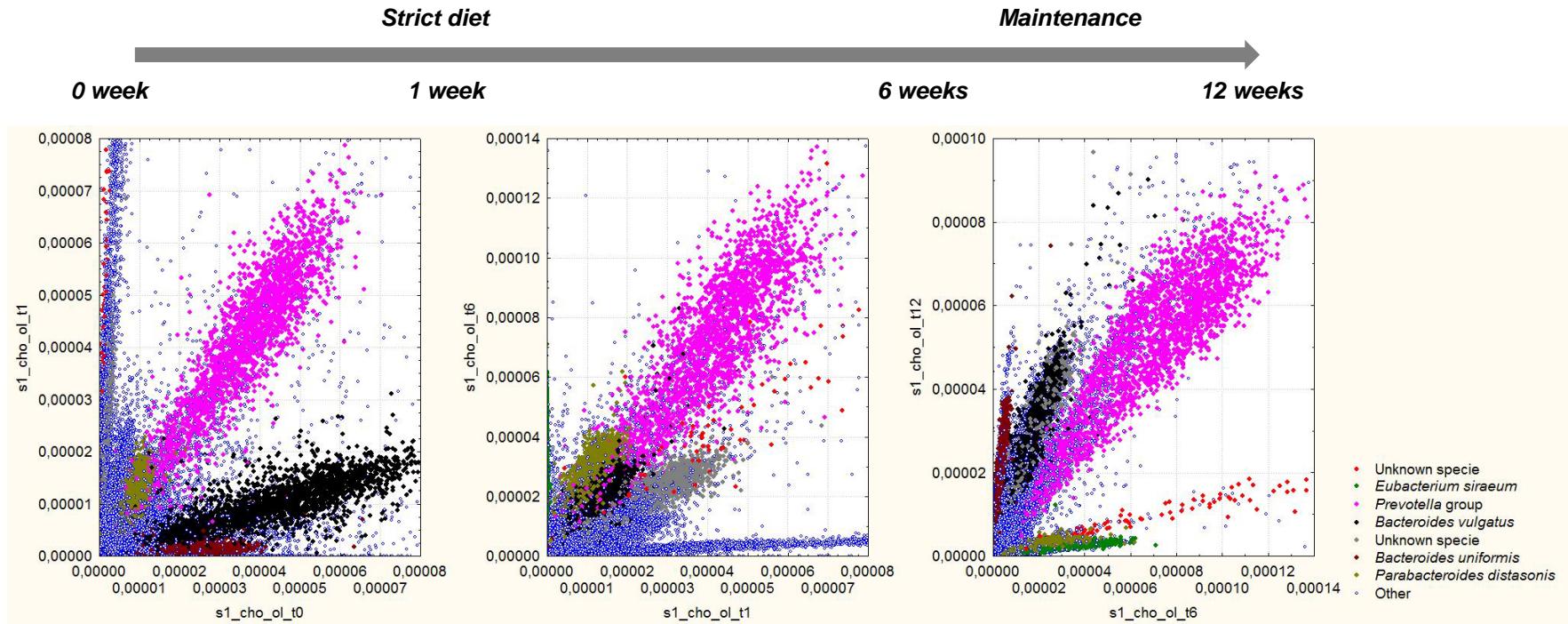
Follow the microbiota dynamic and identify signatures of obesity and nutritional transition in the intestinal microbiote

- DNA sequencing (SOLiD) of **215** faecal samples of **49** obese individuals sequenced at 3 different time-points (t_0 , w_6 , w_{12} and extra-time)
→ **300 Gbases sequenced**
- Read projection against the MetaHIT gene catalog (Qin et al., 2010) (3.3 millions genes)
→ **150 Gbases projected**
- Gene clustering and bacteria composition determination



Micro-Obes project

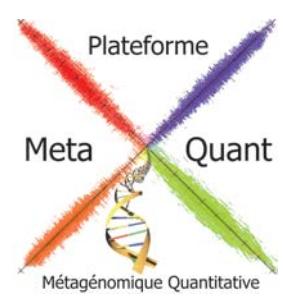
Dynamic of microbiota during the diet



Important variation of gene composition during the first part of the diet
 More stable composition in the second part (stabilization)

Different dynamic profiles observed
 Association with clinical data (ongoing work)

MetaQuant
Dusko Ehrlich
Sean Kennedy
Nicolas Pons
Nathalie Galleron
Benoît Quinquis



Team « Informatique »
Jean-Michel Batto
Pierre Léonard
Bouziane Moumen



Team « Bactéries Alimentaires et Commensales »

Bioinformatic
Emmanuelle Le Chatellier
Mathieu Almeida
Fouad Boumbezeur

Biology
Christine Delorme
Eric Guédon
Séverine Layec
Céline Gautier
Nicolas Sanchez

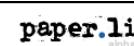
Pierre Renault



http://www.netvibes.com/metahit#Live_News



<http://twitter.com/metagenomics>



<http://paper.li/metahit/microbiomics>