Research interests of Dr Konstantinos Papadimitriou
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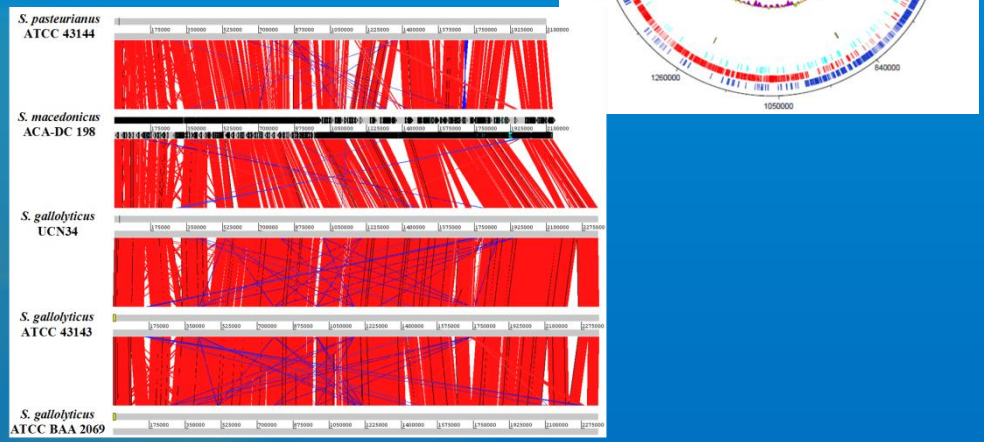
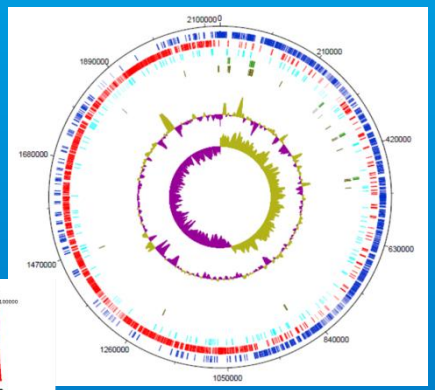
Research topic 1: Physiology, genetics and genomics of lactic acid bacteria

- Lactic acid bacteria are involved in food fermentations as starter cultures. Understanding their biology is of outmost importance for high quality fermented foods
- Lactic acid bacteria exhibit sometimes important health-promoting probiotic properties





fermentation by lactic acid bacteria

Research topic 1: Screening for novel starters and probiotics

Fermented dairies

Fermenting ecosystem

Experimental dairy production

Basic Research

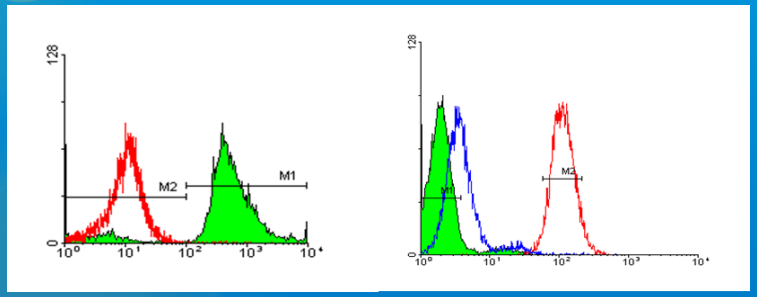
- Taxonomy
- metabolism
- physiology
- genetics and genomics
- bioinformatics

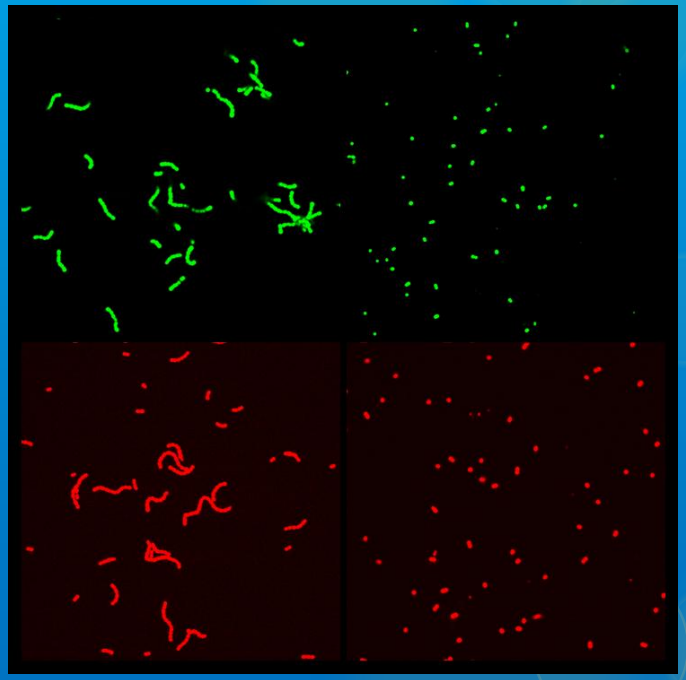
Technological properties

- flavour bio-generation
- bio-texturant molecule development
- bio-preservative molecule production (antimicrobial peptides)
- probiotics

Research topic 2: Single cell microbiology

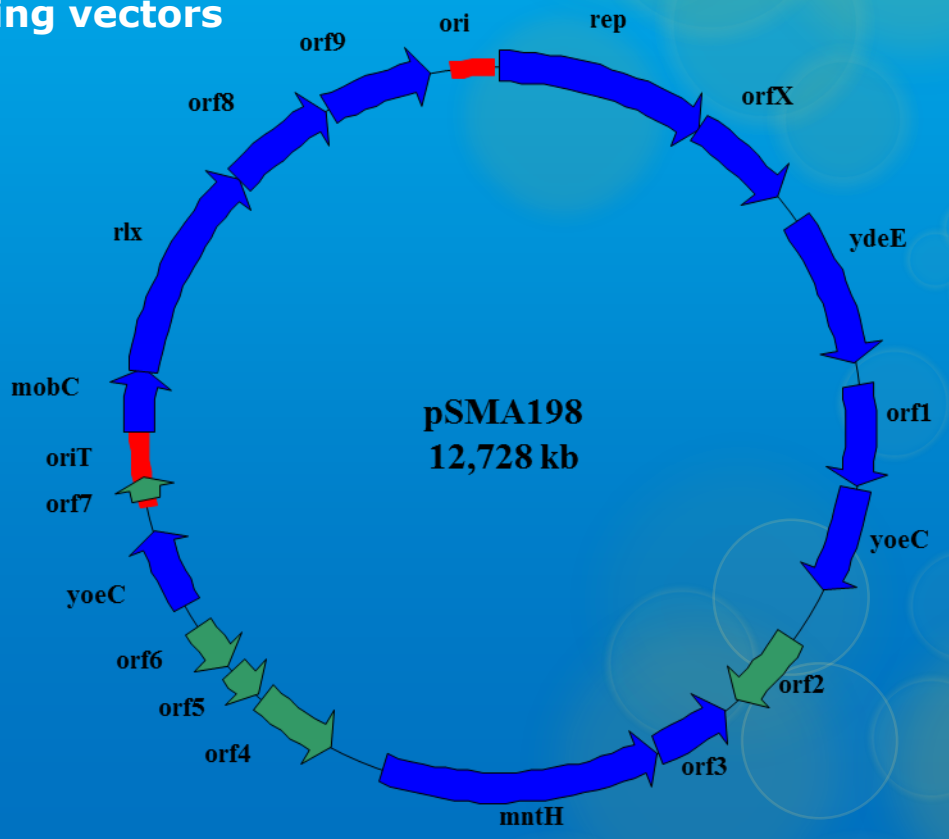
- **Flow cytometry coupled with fluorescence probes is a powerful tool to analyze microbial populations at the single cell level**





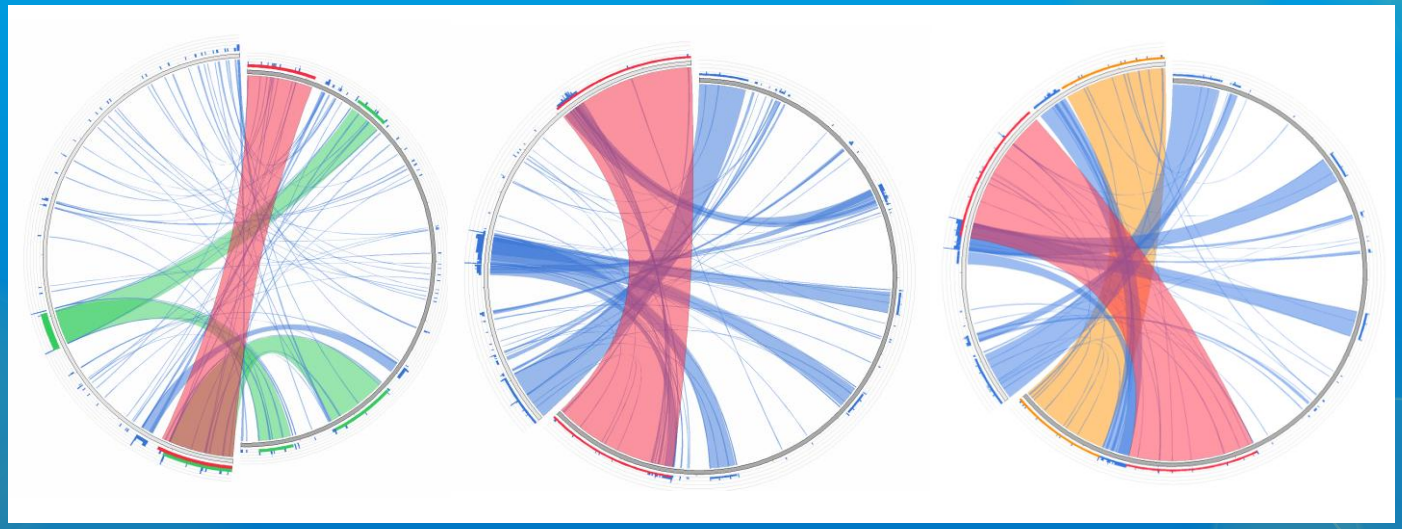
Research topic 3: Plasmid biology

- Plasmids are extra-chromosomal genetic elements
- Plasmids of lactic acid bacteria often carry important technological properties
- Plasmids can be used to create cloning vectors



Research topic 4: Applied Bioinformatics

- **Application of specialized bioinformatics tools for genome analysis and annotation, as well as comparative and evolutionary genomics**



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