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ADVANCED APPROACH IN BACTERIAL CELLULOSE PRODUCTION: FROM THE ORGANISM TO THE PROCESS

University of Modena and Reggio Emilia, Research Doctorate in agri-food sciences, technologies and biotechnologies

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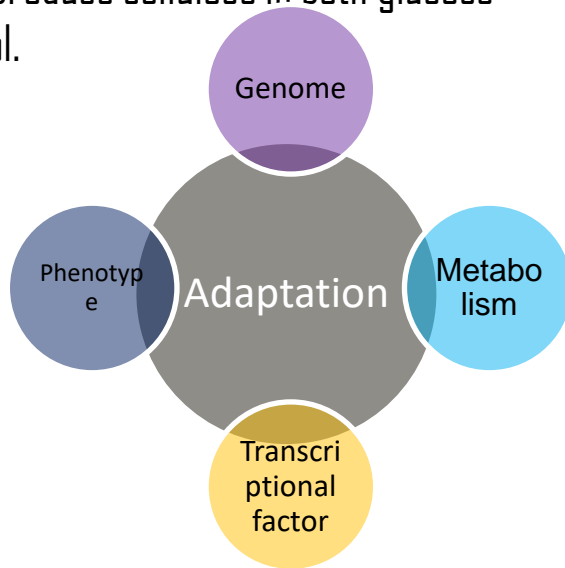
Cycle- XXXV

Workshop 4th December 2020

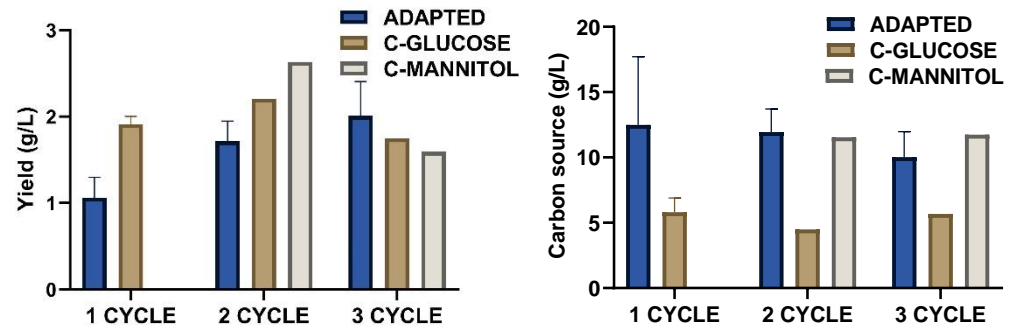
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Background

- Bacteria adapt themselves to the different environmental conditions
- Bacteria modify their metabolism based on the environment
- The adaptation process is a multilevel regulation
- Stimulation of transcription factors occurs due to limitation of optimum conditions.
- K2G30 can produce cellulose in both glucose and mannitol.



Preliminary tests



Future perspectives:

- Analyse mutation associated with the stress
- Behavior of evolved strain in terms of cellulose production.
- Understanding the metabolic changes
- Study changes at genome level
- Study pathways associated with the respective networks