

# **Grupo de Trabalho 2**

## *Working Group 2*

**SESSÕES PARALELAS**  
**PARALELL SESSIONS**

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# 1. General and specific objectives of the project

- General: Valorisation of grapevine microbiome
- Specific objectives:
  - Characterization of grapevine microbiome (plant and soil)
  - Establish links between grapevine microbiome and specific regions (geographical origin)
  - Correlate microbiome with physiological state of the grapevine
  - Correlate microbiome with the quality of grapes

# 1. General and specific objectives of the project

- Potential impacts:
  - Better characterisation of regional terroir
  - Characterisation and preservation of local biodiversity (terroir)
  - Increased grapevine productivity and health by use of native microflora
  - Increased overall grape quality

## 2. S3 priority areas targeted

- Sustainable Industrial Solutions – Increased grape quality and production, replacement of chemical synthetic products
- Valorisation of endogenous natural resources - by using native microbes
- Technologies for quality of life – contaminant reduction (less chemicals, more natural products) changes in metabolite profile of grapevines with potential health implications, increased grape quality
- Territorial innovation – characterization of terroir, reduction of carbon footprint (less synthetic products), increase regional competitiveness

### 3. Innovative aspects of the project and progress beyond state of the art

- Existing information/literature is limited (5-10 yrs), mostly related to microflora characterization
- The project proposes an applied and multidisciplinary approach to the topic
- Innovative project in regional and national context (which could be expanded internationally)

# 4. Main Work packages

- WP1-Management
- WP2- Characterisation of the grapevine microbiome
- WP3-Correlation between origin (climate, soil, plant physiology data) and microbiome information
- WP4-Metabolomic analysis of grapevines and grapes
- WP5-Isolation of native microorganism and inoculation in vineyards
- WP6-Impact on final wine quality (vinification and wine analysis)

## 5. Expected impact

- Better characterisation of regional terroir
- Characterisation and preservation of local biodiversity (terroir)
- Increased grapevine productivity and health by use of native microflora
- Increased overall grape quality



## 6. Key barriers for the development of the idea

- High costs
- Multidisciplinarity required
- Complexity/variability of the vineyard ecosystem
- Difficulty in involving some stakeholders (wine companies)

# 7. Potential participants and leadership

- Universities: UTAD, Universidade Aveiro,
- RTOs (e.g. BioCant)
- Wine companies/Associations (ADVID)
- Subsidiary companies: starter-cultures (e.g. Lallemand, Chr Hansen, etc.), phytochemical (e.g. Bayer)

## 8. Specific expertise/knowledge brought by the actors

- Universities– microbiology, genomics, metabolite analysis, plant physiology, soil and climate, sensory analysis, bioinformatics, enology
- RTOs (BioCant) – metagenomic analysis
- Wine companies – vinification, experimental fields (grape and grapevine materials)
- Subsidiary companies – isolation, product development, certification, market implementation of new products, ...

# 9. Relevance for national and European level

- Characterization of terroir, increase quality of Portuguese and European wines
- Production of safer and healthier wines
- Potential environmental benefits - Reduction of carbon footprint, contaminants (less chemicals)
- Increase regional/national/European competitiveness
- Knowledge transfer between wine-producing regions/countries (R&D, advanced training, etc.)

# 10. Main cost items of the project

- Human resources
- External services (genome sequencing)
- Equipment
- Consumables
- Travel & meetings
- Overheads

# 11. Possible funding sources of interest (already applied or of interest)(regional, national or EU)

- EU – H2020, Marie Curie, ERC
- National – FCT, ANI
- Regional – CCDRs (FEDER/Compete)

# 12. Steps forward / Action Plan

- Look for potential partners
- Check open calls/European research agenda
- Setup meetings for project development

# **International Development LAB on the Valorisation of Endogenous Resources in the Wine Value Chain**

**This activity will be co-implemented by CCDRC and the European Commission's  
Joint Research Centre in collaboration with DG REGIO.**

19th June 2018

Museu do Vinho da Bairrada / Bairrada Wine Museum

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