

# **BIO-258 Gene Transcription and Expression in Eukaryotes**

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The Bio-258 group is engaged in analyzing the gene transcription and expression in eukaryotes and their research focuses on two major lines: olive groves and transcriptional machinery in eukaryotes.

Our studies focus on '-omic' approaches (genomic, transcriptomic and proteomic) with various objectives, such as:

- To acquire more in-depth knowledge of the olive tree genome.
- To increase the number of sequenced genomes in olive tree varieties throughout the Mediterranean Arc and to create the first database on multi-varietal genetic information on olive trees.
- To establish -through transcriptomic and genomic analysis- the genetic basis for olive tree tolerance to verticillium wilt.
- To identify and characterize new proteins in the transcriptional machinery that coordinate the mRNA synthesis and maturation required for synthesizing proteins and regulating gene expression.
- To embark on new studies aimed at establishing the interconnection between proteins of the transcriptional machinery-molecular signaling pathways-cell cycle, allowing us to establish a functional relationship with tumor processes and take the leap to new biomedical approaches.

## **Website of the group**

[The Gene Transcription and Expression in Eukaryotes research group's Web](#)

## **Research lines**

- Olive tree gene research
- Analysis and transcriptional regulation in yeasts
- Analysis of development in olive trees
- Response to stress in olive trees
- Analysis and purification of protein complexes

## **Related services and products**

- [Vector designed for destroying latent viruses in the treatment of human immunodeficiency virus type 1 \(HIV-1\) through gene therapy](#)
- [Method for diagnosing verticillium wilt in olive trees](#)
- [Detection of gene mutations](#)
- [Genomic studies](#)
- [Molecular analyses for diagnostic use](#)
- [Transcript quantification](#)
- [Analysis of protein-protein interactions](#)
- [Protein overproduction](#)
- [Analysis of gene expression](#)
- [Development of markers for genetic improvement](#)
- [Specialization courses in Gene Transcription and Expression in Eukaryotes](#)

**Spanish website:** <https://bit.ly/2rMUQff>