

## Tyrosol antioxidant effect in C2C12 cell line

Sabrina Burattini, Francesco Maria Giordano, Davide Curzi, Sara Salucci, Elisabetta Falcieri

Department of Earth, Life and Environmental Sciences, Urbino University Carlo Bo, Urbino, Italy

Tyrosol (4-(2-hydroxyethyl) phenol) (Tyr) is a well-known phenolic compound that is mainly present in extra-virgin olive oil and white wine. It has many beneficial properties, such as antioxidant, antimicrobial and anti-inflammatory activity and has been reported to have scavenging effects on peroxynitrite and superoxide anion (1). Moreover, Tyr exhibits anticancer, anti-depressant, anti-stress, cardioprotective, anti-osteoporosis, anti-inflammatory and neural protective effects (2).

Here Tyr effect has been investigated in a skeletal muscle cell line exposed to known oxidative stress inducers (3, 4).

To evaluate Tyr protection against oxidative stress and cell death, ultrastructural and functional analyses have been carried out. In particular, mitochondrial probes used and analysed at confocal microscopy. All techniques confirmed that Tyr is able to prevent skeletal muscle damage, to preserve mitochondrial membrane integrity and to down regulate oxidative stress levels. These findings demonstrated Tyr antioxidant property in skeletal muscle cell too, suggesting, for this molecule, an important potential role in all muscle diseases related to reactive oxygen species production.

### References

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### Keywords

Tyrosol; C2C12 cells; oxidative stress.