

## Production of hydroxytyrosol with high yields

CSIC has developed a recombinant microorganism that allows a production of hydroxytyrosol from glucose with a high yield and high degree of purity. Hydroxytyrosol is one of the most powerful antioxidants known and can be used as a nutraceutical by its anticancer, cardioprotective, anti-inflammatory and neuroprotective properties.

Currently, the main source to obtain hydroxytyrosol is the alpechin, from the olive industry. But it is a process with a scarce performance and where a very little purified compound is obtained. By this new invention, hydroxytyrosol can be obtained with a high degree of purity by a simple method and with high yield.

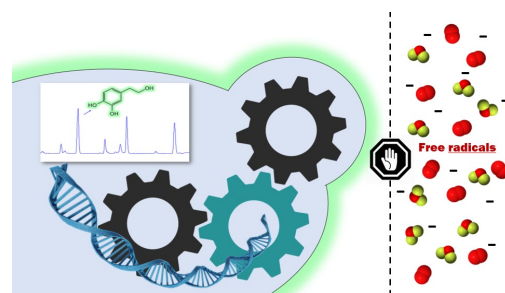
Nutraceutical companies interested in the license of the patent for the production of hydroxytyrosol at industrial level are being sought.

### *An offer for Patent Licensing*

#### Reduction of production costs of hydroxytyrosol and increase in process yield

The biotechnological techniques currently used to produce hydroxytyrosol involve the addition of the tyrosine aminoacid in the culture medium. In the technology developed by the CSIC, this compound occurs directly from glucose, so it lowers production costs and also allows to increase the yield of the process.

On the other hand, hydroxytyrosol produced has a high degree of purity. And it is in that state when it has been proven that the antioxidant has more nutraceutical properties.



Representation of obtaining the recombinant microorganism that produced hydroxytyrosol

#### Main innovations and advantages

- Production of Hydroxytyrosol in a simple way, with high yield and with a high degree of purity.
- Production from the yeast of the wine *Saccharomyces cerevisiae*, considered a safe body (GRAS)
- Glucose is used as a carbon source to produce hydroxytyrosol. Which allows the production costs significantly.
- Hydroxytyrosol has important nutraceutical properties, such as anticancer, cardioprotective, anti-inflammatory and neuroprotective.
- It can be used in multiple applications improving the nutraceutical capacity of the product.
- Hydroxytyrosol is a product that reaches high prices when it has a high degree of purity. As we obtain using the technology developed by the CSIC.

#### Patent Status

Priority patent application filed suitable for international extension

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