



SOGRAPE AND INL SHARE PATENT FOR SENSOR TO MONITOR GRAPE RIPENESS

Worldwide marketing perspective leads to global patent registration

Press Release 19/09/2022 - Sogrape and the INL - International Iberian Nanotechnology Laboratory - have signed an agreement establishing joint ownership of an already registered patent describing an autonomous, miniaturised sensor that uses light to measure grape ripeness in real-time. Registered in several countries, this is Sogrape's first science-based patent, as it marks its 80th anniversary.

This project results from the partnership between Sogrape and INL, which began in 2015, to explore opportunities for emerging technologies, such as microelectronics and nanotechnology, for the wine sector.

Without needing vineyard samples or laboratory analysis, the sensor analyses the light that is re-emitted by the grape tissue, which varies according to the levels of sugars and organic acids in the grape. During ripening, the sugar content increases and the organic acid content decreases.

The innovation of the design lies in the way the sensors are attached to the bunch of grapes and the ability to analyse several berries in the bunch at the same time, which gives a representative view of the variation that exists within each bunch, between bunches and between vines in the same vineyard, giving the wine-grower and winemaker an accurate picture of how ripening occurs in each location, in real-time.

The simplicity of the registered concept and the use of precision optoelectronic micro-components in its construction allows the prospect of commercialisation at affordable prices when it becomes mass produced. The patent has been registered in the European Union, United Kingdom, USA, South Africa, China and Australia and awaits registration in New Zealand and Chile.

Sogrape's R&D department has promoted long-lasting partnerships for several years to bring scientific excellence to the development and progress of the wine sector. According to António Graça, *"this patent arose from a challenge we pitched to INL based on a dream of having a more accurate and real vision of grape ripening". "INL researchers responded to the challenge by interacting with us periodically and frequently. Naturally, there were moments of appreciation of our wines that helped explain what words could not. And, thus, the invention was born"*, Sogrape's Head of R&D said.

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Be responsible. Drink in moderation.

Since revealing its purpose, the INL has been working hard to fulfil its promise of becoming a world reference for nanotechnology. *"With this patent sharing agreement, the result of 5 years of joint work between INL and Sogrape, we pave the way for a more consolidated intellectual property exploitation plan and bring the Internet of Things (IoT) to the vineyards - the real in situ "sensing",*" Prof. Paulo Freitas, Acting General Manager of the INL said.

About Sogrape

Founded in 1942 by Fernando Van Zeller Guedes, Sogrape was born to demonstrate the quality of Portuguese wines to the world. From a single winery in the Douro Valley focused on the production of Mateus Rose, this family company has become global, with presence in more than 120 markets, owning c. 1,600 hectares of vineyards in Portugal, Spain, Chile, Argentina and New Zealand.

Moved by the purpose of bringing Friendship and Happiness to everyone it touches through its wonderful wines, family spirit and peak-performing team culture very much alive at Sogrape are key in the successful path it has been building for almost 80 years.

Under the leadership of Fernando da Cunha Guedes, current President and 3rd generation of the founding family, the leading company in Portugal aims to spread Sograpiness through the world and be affirmed as a catalyst for positive societal change, respecting the limits of the planet in the construction of a more sustainable and inclusive future.

About INL

INL, based in Braga, was founded by the governments of Portugal and Spain under an international legal framework, to carry out interdisciplinary research, and implement and articulate nanotechnology for the benefit of society. The INL aims to become the world reference of nanotechnology to meet society's great challenges. Research and Technology activities are focused on six clusters: Health, Food, Energy, Environment, Information and Communication Technologies and Emerging Technologies of the Future, which complement each other and provide a basis for interdisciplinary interactions.