

THE POWER OF GRAPE EXTRACTS: ANTIMICROBIAL AND ANTIOXIDANT PROPERTIES TO PREVENT THE USE OF ANTIBIOTICS IN FARMED ANIMALS

NeoGiANT is an innovative project that offers new solutions based on the known potent natural antimicrobial and antioxidant activities of grape marc extracts, due to their arsenal of phytochemicals, in particular their phenolic compounds content, to produce enhanced feed, treatment products and natural sperm preservatives for livestock and aquaculture.

The **NeoGiANT** project will demonstrate at pre-industrial scale a sustainable natural-based extraction process for the recovery of low-cost polyphenols from white grape marc biomass to produce natural antimicrobial and antioxidant high value products, meeting market trends in feed, pharma and artificial insemination niche sectors with key actors involved in the implementation. These products will satisfy the actual demand for more affordable natural functional products from alternative sources.

Customers demand solutions for animals' health with no side effects for animals and final consumers. They also demand environmentally friendly products. Natural extracts produced within the **NeoGiANT** project fulfil these demands. Natural extracts will be produced as an alternative to synthetic compounds with antimicrobial and antioxidant capacities. **NeoGiANT** products are based on 3 pillars 1) the use of local biomass sources 2) cost-effective, efficient, sustainable production 3) functional ingredients obtained in sustainable circular economy production systems.

NeoGiANT will validate solutions to ensure sustainable food production in the future, considering the increasingly uncertain environmental conditions and move towards resource-smart, climate-smart and "eco-healthy" production and consumption.

NeoGiANT ingredients key value proposition is developing and testing functionality under the perspective of animal health, reducing environmental impacts and contributing to the circular economy. **NeoGiANT** final products, which are enhanced feed, natural therapies for animal production and semen extenders will not only avoid the growth of microorganisms but also improve the health and welfare of the animals, increasing profitability.

The project is sustainable at 3 levels: **environmental** (agri-food by-products as raw material -specifically, grape marc from winemaking- and green technologies (no harmful chemicals, low temperatures, energy efficiency); **economical** (production process is low cost and zero-waste); and **social** (**NeoGiANT** will contribute to the development of local wine producers). The target products to be developed will be designed to control a large number of diseases of paramount importance in animal production, both in livestock (cattle, swine, poultry) and aquaculture. As a result, **NeoGiANT** aims to provide effective alternatives to the main antibiotics used in farmed animals, contributing to the goal of reducing their use, by using them only to the treatment of severe infections and not as an indiscriminate preventive action. At the same time, the speed of emergence of new antimicrobial resistances (AMR) will be reduced, and existing antimicrobial resistances will be better controlled. The project will contribute to the transition to a non-antibiotics environment, to sustainable food systems, and to the global action plan on antimicrobial resistance, and it is in line with the "One Health approach".

EUROPEAN FUNDING

The project belongs to the Green Deal, specifically to the call H2020-LC-GD-2020-4. The overall budget of the project is 9,332,246.49 €, with a contribution from the European Commission of 8,374,688.42 €.

PROJECT PARTNERS

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101036768

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8 industrial partners, 10 research Institutions & universities and 2 non-profit organisations compose an equilibrated NeoGiANT consortium encompassing 8 European Countries: Belgium, Czech Republic, Spain, Poland, Hungary, United Kingdom, Portugal and Germany, and 1 non-EU country: Argentina.

The partners are: University of Santiago de Compostela (coordinator) (Spain), Moredun research Institute (United Kingdom), Prof. Wacław Dąbrowski Institute of Agriculture and Food Biotechnology Veterinary Research Institute (Poland), Veterinary Research Institute (Czech Republic), Hungarian University of Agriculture and Life Sciences (Hungary), Freie Universität Berlin (Germany), University of Porto – Science Faculty (Portugal), University of La Laguna (Spain), Asociación Española de Normalización (Spain), University of South Bohemia (Czech Republic), National Scientific and Technical Research Council (Argentina), Asociación Agraria de Jóvenes Agricultores (Spain), Anitom S.L (Belgium), i-Grape Laboratory S.L. (Spain), Contactica S.L (Spain), Nutrition Science (Belgium), CZ VACCINES (Spain), LIFEBIOENCAPSULATION SL (Spain), BIANOR BIOTECH (Spain), MAGAPOR S.L. (Spain).

FOR MORE INFORMATION

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