



NeoGiANT

The power of grape extracts: antimicrobial and antioxidant properties to prevent the use of antibiotics in farmed animals

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Coordinator: Marta Lores
University of Santiago de Compostela (USC), Spain





Project description

NeoGiANT is based on the recovery of **POLYPHENOLS** from white grape marc by a sustainable extraction process to produce **NATURAL ANTIMICROBIAL AND ANTIOXIDANT EXTRACTS** as functional ingredients for high value products, meeting market trends in **FEED, PHARMA** and **ARTIFICIAL INSEMINATION** sectors

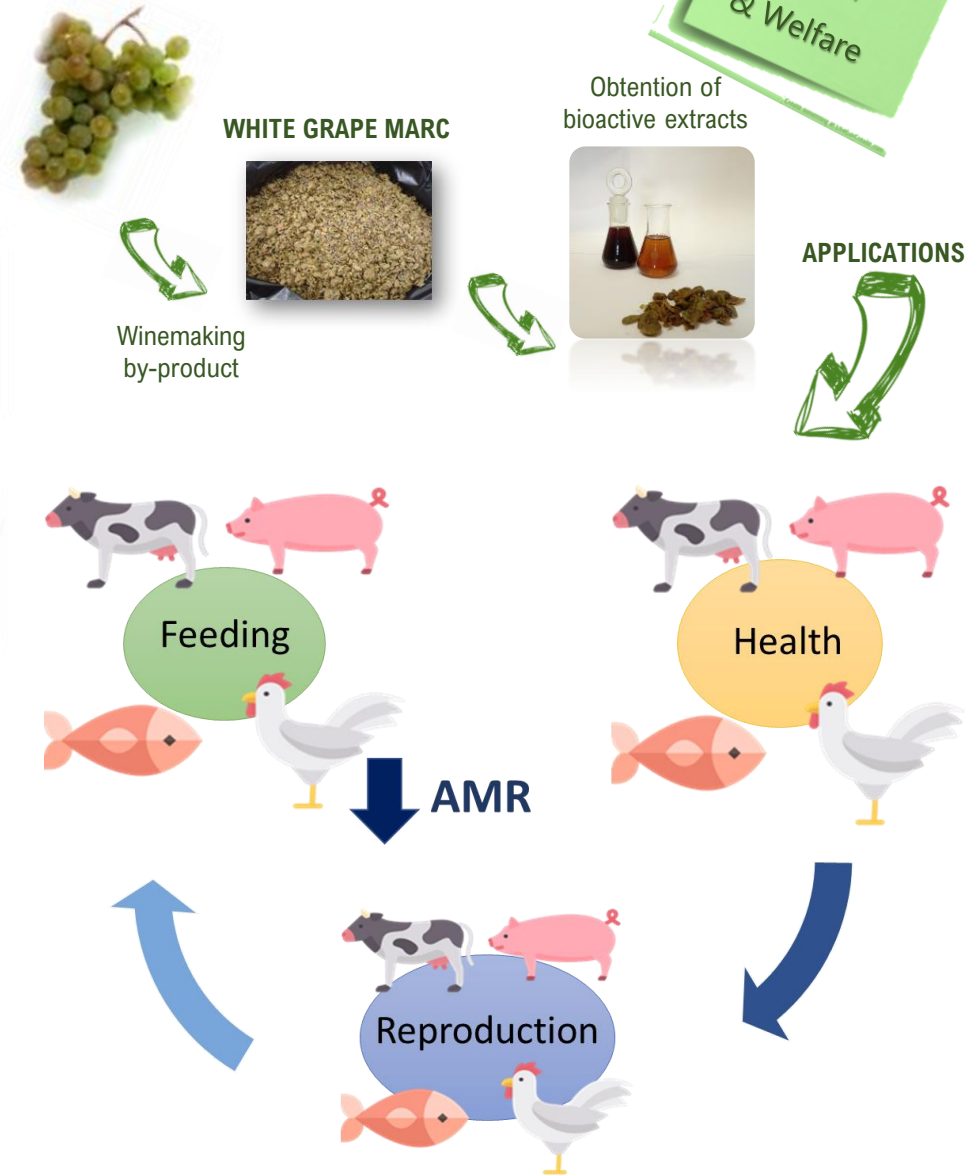
TARGET PRODUCTS

- Enhanced **feed & feed additive** for animal feeding
- Natural products** for the **treatment of important diseases** in animal production
- Sperm preservation**



- Mastitis
- Exudative epidermitis
- Poultry enteric diseases
- Farm fish diseases

Polyphenols are natural phytoarms



Main objective

To develop and validate **innovative natural formulations** with *antimicrobial* and *antioxidant* properties from the valorization of white grape marc, **to be used in cattle, swine, poultry and farmed fish**, considering the whole circle in animal production: FEEDING, HEALTH and REPRODUCTION areas, **aiming to reduce the dependence on the use of antibiotics** in animal and aquaculture production.

This strategy should significantly contribute to the **fight against antimicrobial resistance (AMR)** derived from the production of animals on farms, by providing an economically viable alternative to the routine use and abuse of synthetic antibiotics.

Our final applications

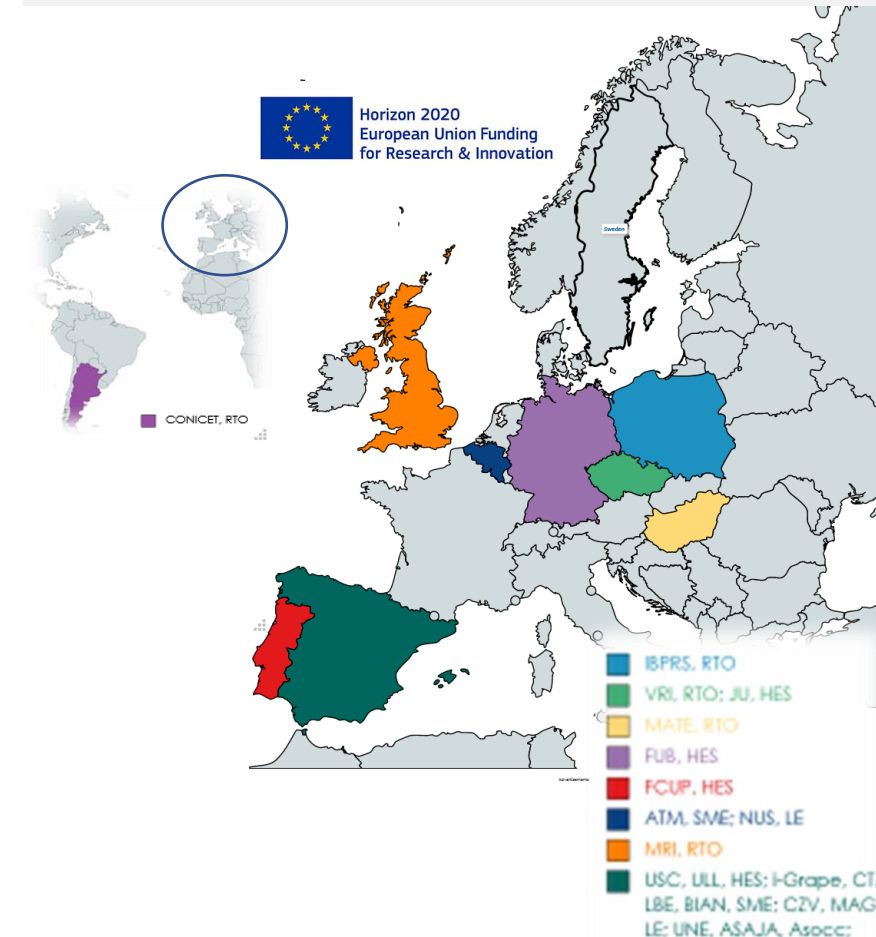
Animal feed

Therapeutic products

Semen extenders

Consortium overview

8 industrial partners
 10 research institutions & universities
 2 non-profit organisations
 covering **8 EU countries** & **1 non-EU country**



Outcomes

- Validation of an innovative extraction process to obtain bioactive compounds from white grape marc.
- Demonstration of the antioxidant and antimicrobial activities of the extract and the formulations.
- Validation at pre-commercial level of feed products with natural eubiotic capacities (cattle, swine, poultry and fish).
- Validation of an intramammary application for the treatment of mastitis based on natural extracts.
- Validation of natural antimicrobials to treat exudative epidermitis in swine and fish diseases.
- Reduction of the dependence on antibiotics in artificial insemination (AI) of farmed animals.
- Controlling legal aspects applying to NeoGiANT products and contribute to policy developments.
- Improvement of the consumer perception about ingredients coming from by-products.



● Creating new cross sector interconnections between the Agri-food sector and the animal healthcare sector.

NeoGiANT products are based on 3 pillars:

- The use of local biomass sources.
- Cost-effective, efficient and sustainable production ⇒ zero-waste.
- Obtained functional ingredients in sustainable circular economy production systems

Underutilised wastes from the wine sector

NeoGiANT will reuse the grape marc as biomass feedstock of functional products that will be transformed in enhanced final products. This is accompanied by economic and environmental benefits and a reduced amount of waste.

Antimicrobial Resistance (AMR)

Because prevention is better than cure, NeoGiANT will follow this idea developing eubiotic feed additives with antimicrobial and antioxidant properties that will improve animal health by preventing disease, preventing the appearance of diseases. This strategy will have two advantages: preventing diseases and reducing AMR.

Livestock diseases

New approaches have to be investigated to fight against bacterial diseases without side-effects arising from the food chain or the environment. NeoGiANT follows this approach as new products will be developed aiming to treat cattle, swine, poultry and fish bacterial diseases based on natural antimicrobials as alternatives for reducing the use of antibiotics.

Sustainable production of sufficient and safer animal protein

NeoGiANT will aim to improve the environmental, economic and social sustainability by manufacturing non-synthetic antimicrobial products to be used in livestock production. This will improve efficient usage of resources and help to produce consumer-oriented products.

Antibiotics in semen preservation

NeoGiANT will study the use of bioactive extracts from grape marc as non-synthetic antimicrobial to be used in semen extenders.

For more info, visit our website

